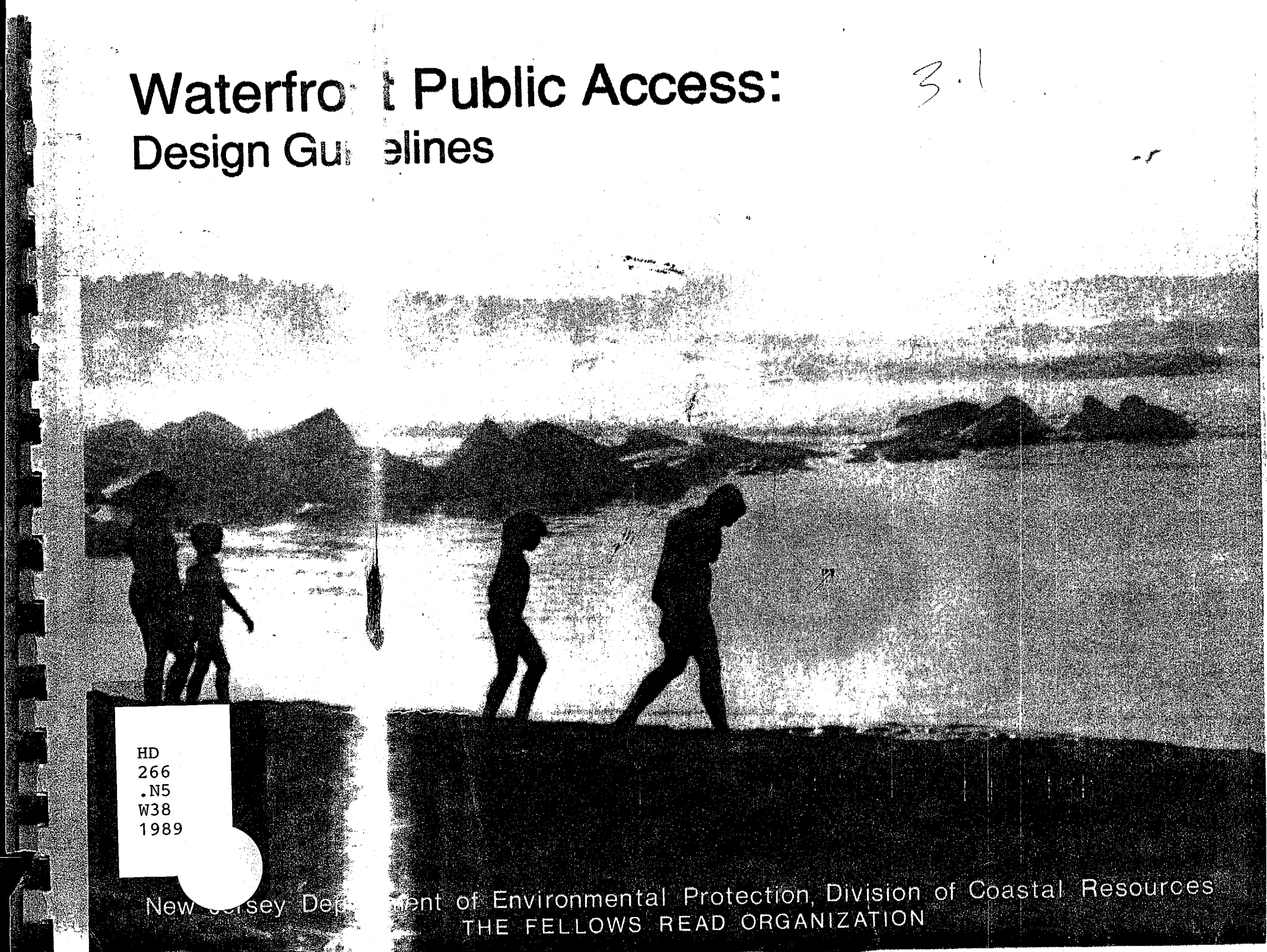
Waterfro t Public Access:
Design Gu elines



New Jersey Dep ent of Environmental Protection, Division of Coastal Resources
THE FELLOWS READ ORGANIZATION

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Waterfront Public Access: Design Guidelines

New Jersey Department of Environmental Protection
Division of Coastal Resources

Prepared by
The Fellows Read Organization

"New Jersey's coastal resources have given us an unequaled maritime heritage and summer playground. They also have placed upon us a responsibility to ensure that this common wealth is protected for the benefit of all."

Commissioner Christopher Daggett
April 1989

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TABLE OF CONTENTS

Introduction

Chapter 1 - **New Jersey's Shore and Waterfront**
- Geographic Scope of Manual 1
- What is Public Access? 1
- Benefits of Public Access 2
- Value of Design in Removing Conflicts 3

Chapter 2 - **Legal Issues**
- The Public Trust Doctrine 5
- State Authority for Public Access 7
- Local Authority for Public Access 9
- Liability 11

Chapter 3 - **Acquiring Public Access**
- Methods for Acquiring Public Access 13
- Real Estate Methods 13
- Regulatory Methods 14
- Financing Public Access 16

Chapter 4 - **Design Guidelines**
- Site Design
  - Oceanfront - Natural Shore 19
  - Oceanfront- Shore Protection Structures 23
  - Inlets 27
  - Bayfront - Wetlands 29
  - Bayfront- Filled Water's Edge 33
  - Marina 35
  - Marina with Upland Development 37
  - Urban Waterfront - Residential or Mixed Use 41
  - Urban Waterfront- Industry 45
  - Urban Waterfront- Water Dependent / Water Oriented 49
  - Rivers - Non-Urban Waterfront 52
- Design Standards
  - General Design Guidelines 56
  - Walkways 57
  - Bikeways 59
  - Boat Launch Ramps 62
  - Boat Docks and Piers 64
  - Shore Protection Structures 66
  - Dune Walkovers 68
  - Handicap Access Ramps 71
  - Decks, Boardwalks, and Viewing Platforms 75
  - Restroom Facilities 77
  - Litter Control 78
  - Lighting 80
  - Seating 82
  - Parking 83
  - Signage 84
- Special Design Areas
  - Critical Areas 85
  - Wetlands 85
  - Beaches and Dunes 87
  - Erosion Hazard Areas 89
  - Steep Slopes and Coastal Bluffs 90
  - Endangered or Threatened Habitats 92

Chapter 5 - **Maintaining Public Access**
- Maintenance 93
- Public Information and Education 96
- Getting There 97

Chapter 6 - **Planning For The Future**
- Further Action 99
- For More Information 101

Bibliography

Waterfront Public Access: Design Guidelines is a guide to public access along and to New Jersey's coast. The manual has been prepared as a reference for local governments, private developers, and others who are interested in providing or utilizing access to New Jersey's coastal resources.

New Jersey's 753 miles of shoreline are a precious recreational and environmental resource in our densely-populated state. Their resource value is much greater than just the area known as the shoreline. Because access to these areas in turn provides access to the vastness of our oceans and rivers, public access points are the doorways to a huge water park.

The manual presents background and design information dealing with the public's right to waterfront access, how it is provided in New Jersey, and design concepts for both ensuring substantial access and minimizing potential conflicts between private landowners and the general public. The manual is organized in a concise, understandable format to make it useful to the widest possible audience.

The first chapter provides a background -- where and what is "New Jersey's Shore and Waterfront." The chapter explains what public access is and why we should provide and maintain it for our citizens.

Chapter two is an overview of the legal issues surrounding the right of public access to the waterfront in our State. The Public Trust Doctrine and the New Jersey Supreme Court cases upholding the right of public access provide the basis for the State's actions and policies dealing with accessibility to the coast. Local governments, as creatures of the state, are also responsible for providing access to waterfront parks and beaches.

"Acquiring Access," the third chapter, is a summary of ways to secure access at waterfront sites. Acquisition need not be an outright purchase of land which in New Jersey may be cost-prohibitive. This chapter suggests other techniques - both real estate and regulatory - by which access may be provided.

Chapter four is the "design chapter" of the manual. This chapter is divided into three sections: Site Design, Design Standards, and Special Design Areas.

In the first section, concept designs are presented for waterfront public access at private development sites and public park land. Development scenarios for each type of waterfront location are considered, including oceanfronts, inlets, bayfronts, marinas, urban waterfronts, and rivers. These concept designs represent design standards which are to be used as guidelines in approaching a waterfront public access situation. The designs are not meant to be site specific, but should be considered as possible solutions to help maximize public accessibility along New Jersey's waterfront.

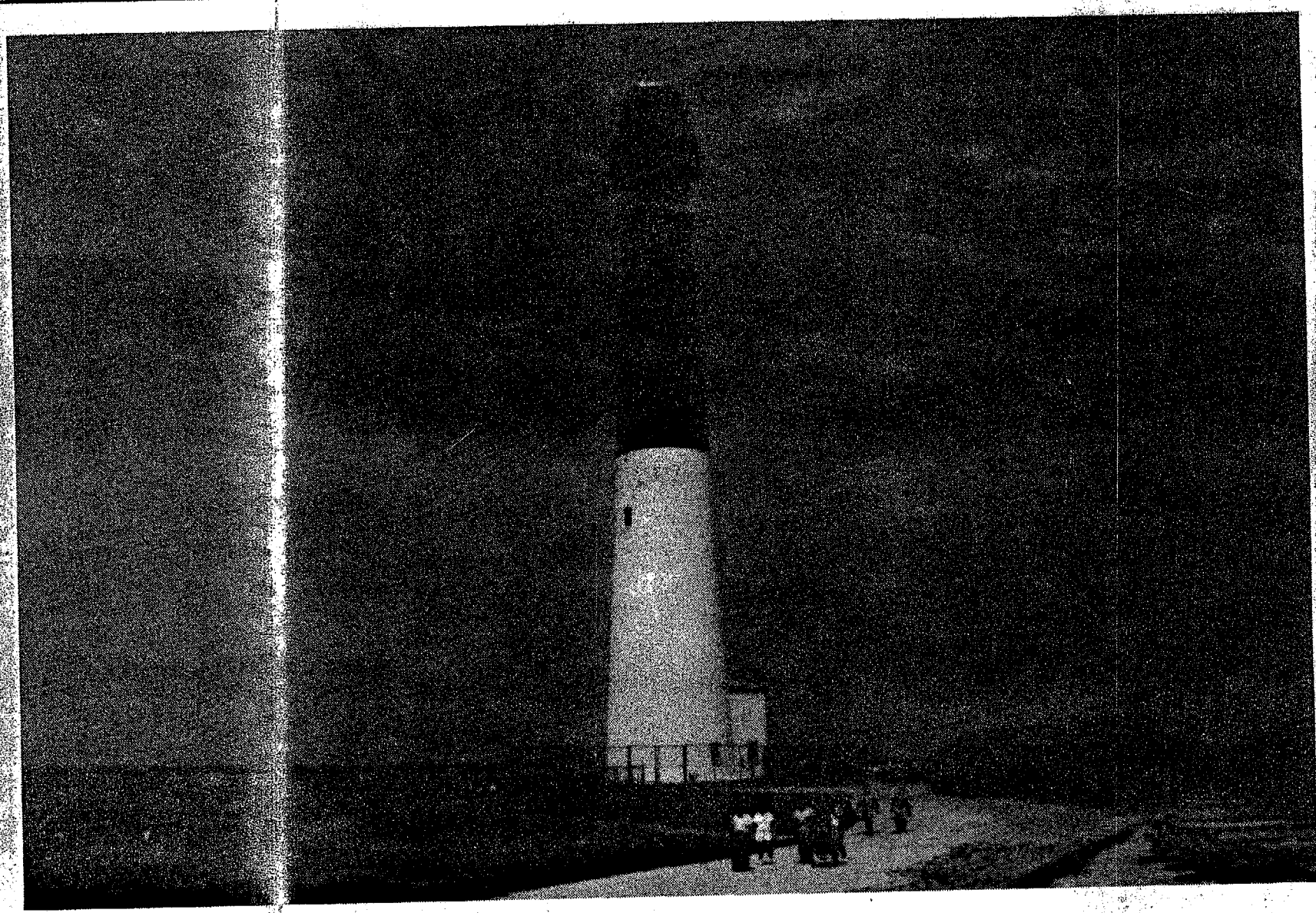
In the second section of the chapter, design standards are provided for key elements of waterfront access. These are illustrated with schematic drawings for walkways and promenades, bikeways, piers, boat ramps, docks, shore protection structures, dune walkovers, handicapped access ramps, and decks and viewing platforms. Other elements - signage, trash receptacles, parking, and restroom facilities - are not unique to waterfront public access sites, however, specific factors relating to a waterfront location are considered in developing these standards. Selected photographs show waterfront structures and facilities where examples exist.

The third section deals with special design considerations associated with coastal areas. A brief discussion of each of these critical areas is followed by suggestions for environmentally-acceptable design solutions for public access at wetlands, beaches and dunes, erosion hazard areas in high velocity wave and flood zones, steep slopes and bluffs, and endangered or threatened wildlife or vegetation habitat.

Chapter five concentrates on "Maintaining Public Access" once it has been put in place. Alternative maintenance arrangements are suggested in the forms of government agencies, homeowners associations, citizens groups, land trusts and others. These maintenance arrangements address the issue of continued funding for maintenance of waterfront public access. Public information and education about New Jersey's waterfront resources, as well as the subject of "Getting There," are included in the discussion of how to adequately maintain public access.

Chapter six concludes the manual with a summary of how far we have come in providing public access to our coastal resources and discusses the actions which have been recently initiated to enhance access to the New Jersey shore and waterfront. Here recommendations are made for continued efforts to improve accessibility to this valuable recreational resource. A reference guide "for more information" about the issue of waterfront public access is included.

Chapter 1
New Jersey's Shore and Waterfront



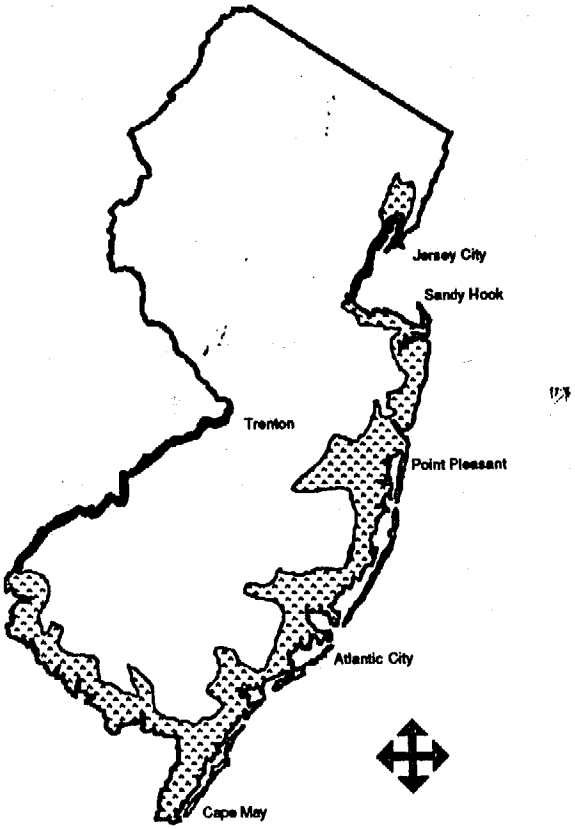
GEOGRAPHIC SCOPE OF MANUAL

The geographic scope of this manual includes the entire New Jersey coastal zone. It encompasses all tidally-influenced water bodies, including the Atlantic Ocean, the bayshore, and the waterfront areas of tidal rivers.

The administrative rules and legal requirements discussed throughout the manual apply to the coastal area, defined in the "Rules on Coastal Resources and Development" as:

> ". . . Under the jurisdiction of the Coastal Area Facility Review Act (N.J.S.A. 13:19-4), all other areas now or formerly flowed by the tide, shorelands subject to the Waterfront Development Law, regulated Wetlands listed at N.J.A.C. 7A-1.13, and the Hackensack Meadowlands Development Commission District as defined by N.J.S.A. 13:17-4" (N.J.A.C. 7:7E-1.2(b)).

Although the New Jersey Coastal Zone Management Program has jurisdiction only over tidal waters of the state, some of the design solutions or techniques for enhancing access to tidal waters may serve as good suggestions for waterfront design along non-tidal water bodies such as lakes, ponds and the non-tidal portions of rivers.



WHAT IS PUBLIC ACCESS?

Public access is defined by the Rules on Coastal Resources and Development as "the ability of all members of the community at large to pass physically and visually to, from and along the ocean shore and other waterfronts" (N.J.A.C. 7:7E-8.11).

The ability to enjoy the ocean, bays, and rivers is directly related to the ability to reach them from the uplands. The ease or difficulty encountered when entering and making use of the waterfront is an essential component of public access.

The intent of the Coastal Zone Program in requiring public access to the waterfront is to share with everyone the special value and benefits of our state's public waters. It is to make available the calming sound of the ocean surf, the warm feel of sand underneath barefeet, the joy in catching the evening's meal, the delight in seeing colorful sailboats cruising along the horizon, and the peace humans naturally associate with being near water.

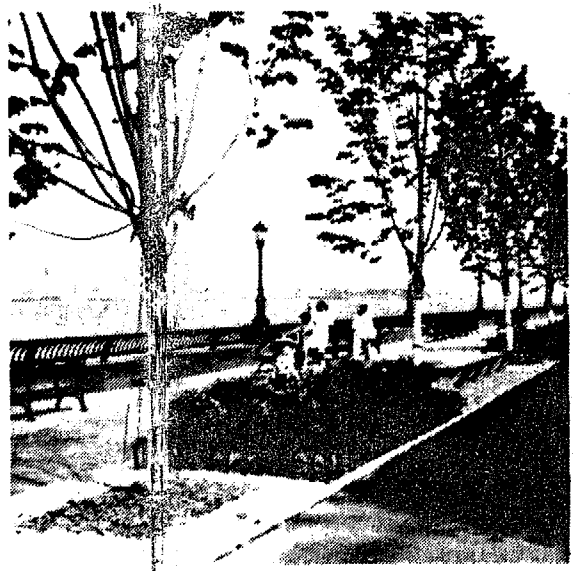
BENEFITS OF PUBLIC ACCESS

Historically the ability to cross private property to reach the water's edge was not an issue of concern. Very little waterfront property was developed and fewer people traveled to visit the shore area. Today, New Jersey's waterfronts are experiencing great popularity. People travel from a wide region to come to our beaches and rivers to recreate and enjoy the pleasures of the water.

New Jersey's waters are popular for boating, fishing, swimming or simply sunbathing. Over 8 million people visit the ocean shore between Memorial Day and Labor Day. An annual total of over 1 million anglers try their luck for bluefish, bass, flounder and a wide range of other species of fish and shellfish on the ocean and bays. Boating has become an extremely popular pastime, with over 150,000 boats registered in the state in 1987, and increasing every year.

Considering the varied array of pleasures and activities, it is not surprising that New Jersey's coast is a favorite vacation spot. Tourism is the state's second largest industry, producing $7.7 billion of revenue in the summer of 1987. A large portion of this tourism is focused on the coastal zone. Its appeal, however, is inextricably tied to the availability and attractiveness of the waterfront areas. As more individuals move to coastal communities and flock to waterfront areas, the need to preserve and increase points of access has become an ever increasing issue of importance.

Meaningful public access incorporates the freedom to use the beach w[illegible] the ability to enjoy the experien[illegible]e. Beaches and other



waterfron[illegible] access points should include [illegible]ements which facilitate enjoyabl[illegible] recreation, such as adequate [illegible]arking or public transit, restrooms, reasonable fees, places to eat, show[illegible]s and changing rooms, as well as a[illegible]cess policies which do not discrimina[illegible]. The oceans, bays, and rivers are [illegible]pecial resources, meant to be shared [illegible] the many, not guarded by the few.

VALUE OF DESIGN IN REMOVING CONFLICTS BETWEEN USERS

New Jersey's waterfront is as varied as the people using it. While the approach to designing public access is equally unique, there are two basic issues that must be addressed in each case.

- the need for consistent design standards coupled with site-specific criteria; and
- the needs of various user groups and avoidance of potential conflict between the groups

The design concepts provided in this manual illustrate possible solutions to specific scenarios. The guidelines are meant to encourage an environmentally sound, aesthetic and consistent approach to establishing public access to our waterfronts. It is important to remember that each site is unique. The solutions provided are not strict formulas to be applied to every site, but rather a base from which ideas should spring.

The value of good design is immeasurable when one considers the psychological, sociological and economic benefits of waterfront accessibility. Aside from the obvious sensual and spiritual pleasure derived from an attractive environment, thoughtful design can greatly reduce potential hazards (i.e., vandalism) and encourage greater usage. High-quality design will attract more users, gain more attention, and ultimately promote further development of public accessways.

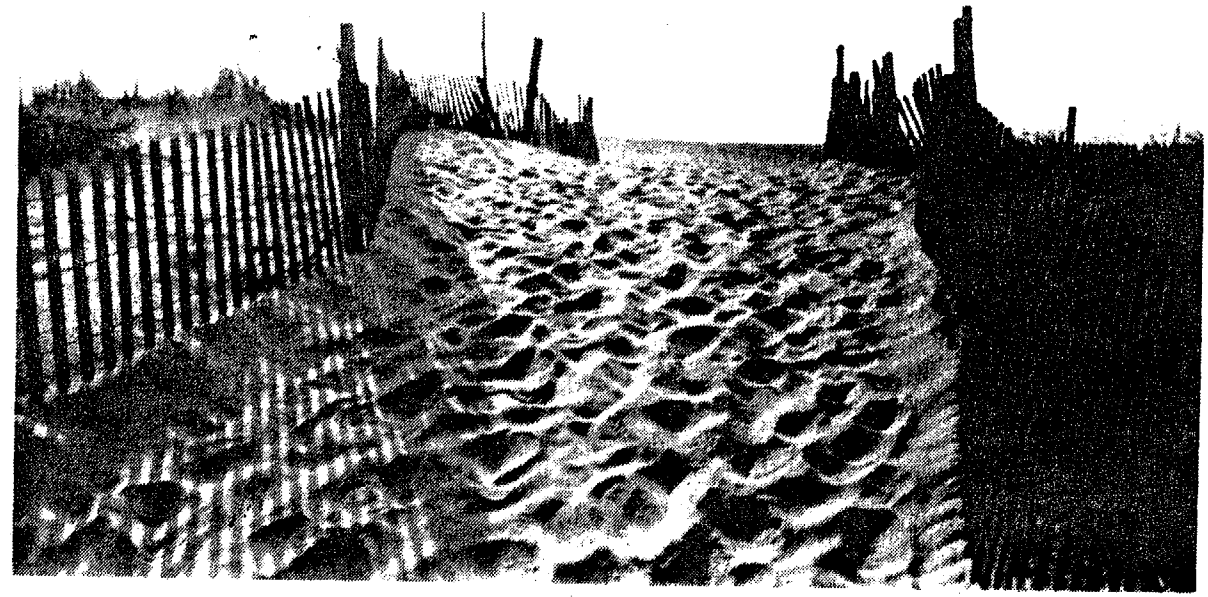
Waterfront property is at a premium in New Jersey and access to it is highly desirable. Understandably, the potential for conflict among users is great. Conflict can be minimized through proper design. The success of well designed waterfronts developments lie in their ability to combine public and private space while adding to the excitement of waterfront activity.

Chapter 2
Legal Issues

THE PUBLIC TRUST DOCTRINE — THE HISTORIC RIGHT TO PUBLIC ACCESS

The Public Trust Doctrine has its roots in 13th century English Common Law, and is based on the principle that every citizen of the commonwealth owns an equitable property interest in all tidal-flowed lands. When lands were transferred from the crown to the colonial governors, the responsibility to hold the lands in trust was transferred with them. After the American Revolution, when the colonies became states, the public trust became vested with the states. The modern application of the Public Trust Doctrine stands for the principle that lands which are tidal-flowed are to be held by the state in trust for the public. Among its duties as trustee of these lands, the state is obligated to protect the public's right to fish and navigate in the waters which flow over them.

From time to time, the state sold the lands below the mean high water line to the owner of the adjacent dry sand beach. Despite their sale to a private entity, the public trust doctrine protects the public's right to have use and access of these flowed lands. The doctrine, however, does not convey the dry sand portions of the beach or uplands to the state. These areas can be either privately owned or owned by a public entity, such as a municipality.



The Public Trust Doctrine established the public's right to access tide flowed lands.

The public's right to utilize tidal-flowed areas is directly related to their ability to gain access to them. In the past two decades, the legal relationship of the upland areas to the water's edge and the public trust doctrine has been the subject of litigation in a number of New Jersey cases, some of which reached the New Jersey Supreme Court. These lawsuits resulted from increased

development and privatization of coastal upland areas. It has become increasingly difficult for members of the public to reach the water's edge because the upland dry sand portion of the beach is privately owned and physical barriers have been placed to prevent the public from reaching the water.

In addition to physical barriers, there have been cases where municipalities and local property owner associations have attempted to limit use of recreational beaches to their citizens and members by methods designed to exclude outsiders. In the majority of these cases, New Jersey courts have ruled that these actions violate the Public Trust Doctrine, in that lands which should be available for the general public's recreational use were being appropriated for the benefit of a select few.

Three New Jersey Supreme Court cases have set legal precedents for establishing and maintaining public access to public trust lands including the following: *Borough of Neptune* v. *Borough of Avon-by-the-Sea*, 61 N.J. 296 (1972), *Van Ness* v. *Borough of Deal*, 78 N.J. 174 (1978), and *Matthews* v. *Bay Head Improvement Association*, 95 N.J. 306 (1984). These Supreme Court decisions have helped shape the modern interpretation of the public trust doctrine, and have allowed public entities to legally protect the public rights that are associated with public trust lands.

In 1972 in the case of *Borough of Neptune* v. *Borough of Avon-by-the-Sea*, the court held that a municipality could not charge higher fees to non-residents than to residents for use of its municipally-owned beaches. In its analysis, the court found that beaches owned by a governmental entity must be equally accessible to all members of the public. The court decision stated:

> "*. . . at least where the upland sand area is owned by a municipality - a political subdivision and creature of the state - and dedicated to public beach purposes, a modern court must take the view that the public trust doctrine dictates that the beach and the ocean waters must be open to all on equal terms and without preference and that any contrary state or municipal action is impermissible*" (61 N.J. at 308-309).

This ruling was reaffirmed by the Court in 1978 in *Van Ness* v. *Borough of Deal* where the Borough had restricted access to a portion of their public beach, known as the Deal Casino, to the exclusive use of residents and property owners. The Court held that Deal could not abridge or limit the Public Trust Doctrine by hindering access or by making alternative beaches open to the public.

More recently in 1984, *Matthews* v. *Bay Head Improvement Association* supported the Avon and Deal decisions. The *Matthews* court held that under the public trust doctrine, the rights of private beachfront owners must give way, to some extent, to the public's right to have "reasonable access to the sea."

In *Matthews*, the beachfront landowners in the Borough of Bay Head leased their private property to

the Bay Head Improvement Association, a private entity which was operated in a public manner. The Improvement Association maintained and policed the beaches on behalf of the property owners. Use of the beaches was restricted to Bay Head residents and guests during the summer months.

The most significant aspect of the decision was the court's reliance on not only the quasi-public nature of the Bay Head Improvement Association, but on the unique importance of the public's right of access to the shore, regardless of ownership. The court stated that under the 'public trust' doctrine, "the public has a right to use the land below the mean average high water mark . . ." (95 N.J. at 321, *citing Avon*, 61 N.J. at 309). "In order to exercise these rights guaranteed by the public trust doctrine, the public must have access to municipally-owned dry sand areas . . . . Enjoyment of rights in the foreshore is inseparable from use of dry sand beaches." (95 N.J. at 321, 322, *citing Lusardi* v. *Curtis Point Property Owners Ass'n* 86 N.J. 217, 228 (1981).)

In 1987, much publicity surrounded the United States Supreme Court's decision in *Nollan* v. *California Coastal Commission* (107 S.Ct. 3141 (1987).). the case was brought by the Nollan's who had obtained a permit from the California Coastal Commission to replace a bungalow style building with a new, larger home on their beachfront property. The permit which was issued contained a beach access condition requiring the Nollan's to permit public access across the beachfront portion of their property.

The Supreme Court's decision invalidated the beach access condition because the provision of public access across the Nollan's property would not solve a problem which they had created. The Coastal Commission's reason for requiring access along the beach was because the new, larger home would block beach views. The Court found that there was no reasonable relationship between the problem caused by the Nollan's new house and the solution imposed by the Coastal Commission.

Although the decision impacted the California Coastal Commission's flexibility in creating beach access, the decision did not invalidate the public's right to access tidal-flowed waters. The case simply reiterated the standard rule that government cannot require private property owners to dedicate land for a public use unless the dedication will solve a problem created by the private landowner.

STATE AUTHORITY FOR PUBLIC ACCESS

The public trust doctrine establishes the basis for the public's right to access of tidal-flowed lands. As part of its duty to administer public trust lands for the benefit of the public, the state as trustee has the responsibility to assure adequate public access to New Jersey's oceans, bays and rivers. This duty is manifest in the Federal Coastal Zone Management Act of 1972 (P.L. 92-583, as amended), the New Jersey Coastal Zone Management Program, completed in August 1980, and the New Jersey Shore Protection Master Plan of 1981.

The Federal Coastal Zone Management Act, passed by Congress in 1972 and substantially amended in 1976, recognizes the importance of the coastal zone and the need to strengthen public protection of coastal resources. The Act encouraged states to take the lead role in coastal management. The Act states that:

> *"The key to more effective protection and use of the land and water resources of the coastal zone is to encourage the states to exercise their full authority over the lands and waters in the coastal zone by assisting the states . . . in developing land and water use programs for the coastal zone, including . . . methods and processes for dealing with land and water use decisions of more than local significance."* (P.L. 92-583).

In response to the federal legislation, the State Legislature gave jurisdiction over the coastal zone to the New Jersey Department of Environmental Protection. The New Jersey Coastal Zone Management Program, formulated pursuant to the Coastal Area Facility Review Act (P.L. 1973, c. 185), recognizes that the coast is a national recreational resource and considers recreation uses to be equal among competing uses of the coastal region. It is a basic coastal policy to have at least one waterfront park in each waterfront municipality, while public access to the water is to be part of private waterfront development whenever feasible.

The Coastal Resource and Development Policies form the substantive element of the Coastal Management Program and serve as the basis for all State coastal permit decisions. These policies are divided into three categories: (1) Location policies consider the characteristics of a specific location within the coastal zone, such as wetlands; (2) Use policies determine which land uses are most appropriate within the coastal zone, such as housing or marinas; and (3) Resource policies focus on controlling the effects of development within the coastal zone, such as maintaining public access to the waterfront.

The resource policy which specifically addresses the need for public access to the waterfront requires that all coastal development provide public access to the maximum extent practicable (NJAC 7:7E-8.13). Each shorefront development proposal must address ten policies relating to access. These ten policy statements are defined in chapter 3 under Coastal Development Permits.

The Federal Coastal Zone Management Act requires each state coastal program to develop a planning process to identify public shorefront areas appropriate for access or protection, assess the effects of shoreline erosion, and study ways to control the impact of such erosion (P.L. 92-583, section 305, (b) (7&9)).

For decades, New Jersey has been engaged in shore protection. Since the 1920's the State has been offering financial and technical assistance to help shorefront municipalities forestall shoreline erosion. Over the years concern for beach protection has grown with the cumulative effects of coastal storms and increased waterfront development.

In 1977, the voters of the State approved a $30 million Beaches and Harbors Bond Issue; and in 1978 the Legislature passed the Beaches and Harbors Bond Act (P.L. 1977, c.157). The Act directed the Department of Environmental Protection to "prepare a "comprehensive beach protection plan" to serve as the basis for spending $20 million for beach restoration, maintenance and protection facilities, projects and programs.

The Shore Protection Master Plan was prepared to provide a cohesive, comprehensive approach to the problems of shore protection and the basis for allocating state funding. The Plan is implemented through the Shore Protection Program Rules and Regulations (N.J.A.C. 7:7-), which provide for a 75% match of state funds for shore protection projects.

The expenditure of state monies for protection structures carries with it a requirement for public access to these areas. Municipal and county governments must demonstrate that adequate public access will be provided along the area effected by the shore protection project. The rationale for this requirement is to insure that the public, who pay for the project, are able to benefit by using the beach areas that are the subject of a beach protection project.

LOCAL AUTHORITY FOR PUBLIC ACCESS

The Coastal Zone Management Program has eight major policies. One of these policies is to "promote public access to the waterfront through linear walkways and at least one waterfront park in each waterfront municipality." The success of this particular goal is dependent upon commitment from local governments to implement it over time.

There are several ways in which a municipality may implement the public access policy within their borders. Property which is owned by the municipality may be set-aside for park development. The municipality's master plan may incorporate a long-range open space plan for waterfront public access on both public and private lands. The municipality may also coordinate their open space and park planning efforts with those of the state and county.

Over 51% of New Jersey's waterfront is owned by municipalities. As landowner of a majority of waterfront lands, municipal government has an overwhelming opportunity and obligation to provide waterfront access through parks and public spaces.

Direct ownership of waterfront land enables a municipality the greatest flexibility in determining how to develop a waterfront park. In many oceanfront towns, the entire beach is held by the municipality. Under these circumstances, a linear park along the entire waterfront may be most appropriate. Where a municipality owns only a portion of the waterfront land in the town, those parcels which are under municipal control should be well-planned to maximize the advantages of the waterfront.

Waterfront lands which are not owned by a public entity should incorporate public access when they are developed by private interests. Regulatory mechanisms may be

utilized to achieve either linear access along the water or well-placed access points where the public may reach the water's edge.

Municipal land use and zoning ordinances may incorporate requirements for adequate public access to the water as part of the conditions of approval for site plans and subdivisions. They may also incorporate design guidelines and development standards which encourage public access elements and discourage obstructions to the water, such as fences or walls.

Municipal power to plan and zone is enunciated in the Municipal Land Use Law (N.J.S.A. 40:55D). This legislation requires that all municipalities in the State prepare a Master Plan which describes a cohesive land use plan for their community. As part of the land use plan element of the Master Plan, municipalities may set aside certain areas for recreation and preservation. These areas may be chosen based on environmental sensitivity, natural values to the general public, previous uses as recreation, unique location, or a variety of other reasons. Communities having waterfront property should designate these areas for land uses which encourage public access and protect the sensitive shorefront environment. As part of the community Master Plan, a municipality can also incorporate a long term plan for developing recreation and park facilities. This plan should designate areas proposed for public recreation, and propose methods for long term acquisition and development. Through long-range open space and park planning, municipalities may secure adequate public access into the future.

In addition to requiring waterfront public access in their own local regulations, municipalities may coordinate their open space and park planning efforts with their county parks department and state agencies, such as the Division of Coastal Resources, the Division of Parks and Forestry, and the Green Acres Program. Various programs may be instituted by these agencies which may help municipal government to achieve their own waterfront public access goals.

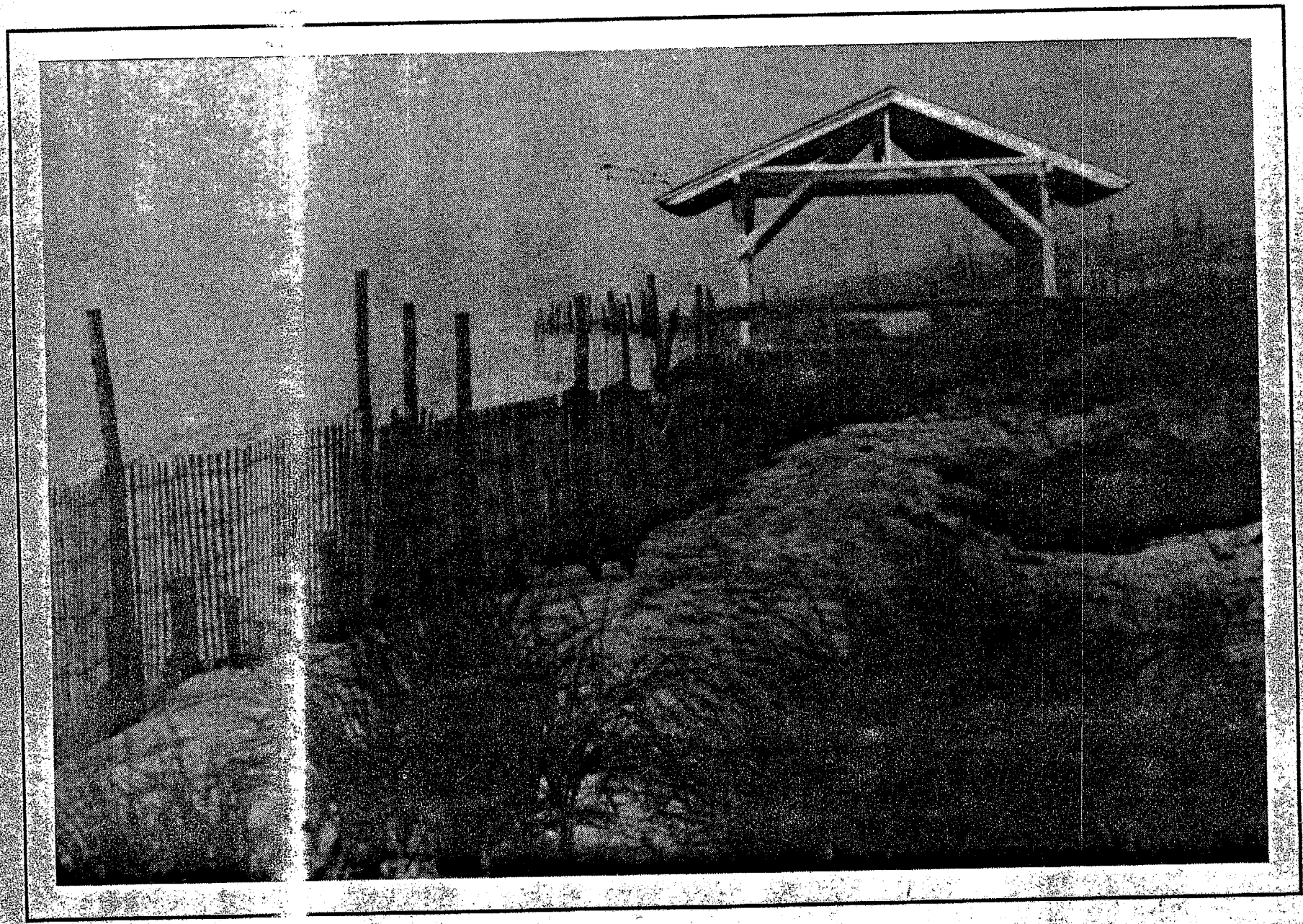
LIABILITY

The property owner is generally responsible for accidents which may occur to individuals while on their land. Liability, therefore, is a justified concern for property owners who provide public access across their lands.

The ever increasing number of lawsuits and rising monetary settlements have made it difficult for public agencies, such as municipalities, to afford liability insurance. Commercial establishments, which invite the public to utilize their site, would normally carry sufficient coverage to insure against public injury, regardless of the existence of waterfront access. Individual property owners and municipal government may not anticipate the need to carry excessive amounts of liability insurance and, therefore, may be wary of potential lawsuits.

To alleviate the risks associated with public access when it is required by the state, legislation has been proposed to amend the Landowners Liability Act of 1968 (N.J.S.A. 2A:42A-2 et seq.). The current legislation only applies to rural and semi-rural lands. The proposed amendments would limit the the landowner's liability for injuries associated with sport or recreational uses on all private property.

Chapter 3
Acquiring Public Access



METHODS OF ACQUIRING PUBLIC ACCESS

The right of the public to utilize the waters of New Jersey is well-established. Every tidal water body carries with it an obligation for public accessibility. The techniques or mechanisms for meeting this obligation are somewhat more complicated.

A variety of methods may be employed to convey and protect the public's right and ability to use and enjoy waterfront lands. Many of the methods utilized in New Jersey involve legal aspects of real estate. Another approach to providing adequate public access is through regulatory mechanisms. The techniques most frequently considered in New Jersey are briefly described in this chapter.

REAL ESTATE METHODS

Fee Simple Acquisition means the purchaser acquires all the legal rights of property. A public entity may acquire ownership in fee simple by purchasing the land from a willing seller or through the exercise of eminent domain. In either case, the public must pay fair market value for the land.

Access easements may be acquired to secure a pathway from a public road to the beach.

Fee simple ownership may also be obtained through dedication of land, at no cost to the public, or at a reduced price. A seller may choose to offer land in one of these two ways, to either a public entity or a non-profit organization, in exchange for other benefits, such as tax credits.

Ownership of waterfront land in fee simple by a public or non-profit entity is the most effective way to secure public access along the waterfront. Full ownership of the land offers the most flexibility for providing access. However, this method of acquisition, unless through dedication or reduced cost, is also the most expensive.

Property Easements secure a limited legal right to utilize some aspect(s) of a piece of land. While fee simple confers all of a parcel's legal property rights, an easement affords its owner the right to enjoy one element of the property, such as the right to walk across it.

Easements may be acquired through the same means as those used in fee simple acquisition. An easement may be obtained through eminent domain, an agreed purchase, or through dedication.

A particular type of dedication is known as a "conservation easement." A property owner may offer an easement on his/her land to a public or non-profit entity in exchange for the assurance that the land will only be utilized in a specific manner, such as farming or grazing livestock.

The conservation easement may be for the entire parcel of land or for a portion of it. In either case, flexibility to use the land is limited to specific terms. If those terms specify that the land is to be utilized for public access or public recreation, this type of easement could be as valuable as fee simple ownership.

Easements "run with the land" (they are not removed when the land is sold) and may be put in place in perpetuity. Acquisition of an easement is generally less expensive than fee simple and may be very effective in securing public access.

Long Term Leases transfer the legal property rights from the original owner to the purchaser for a specified period of time. The leaseholder may then use the land however he/she chooses, but only for the term of the lease.

Long term leases are generally less expensive than perpetual easements and may be used to establish accessways for immediate use. Leases may also provide a short term public access solution while a longer term method is being developed.

REGULATORY METHODS

In addition to the purchase and dedication of property rights for public access, public agencies promote and preserve public access through regulatory mechanisms. The permitting process is utilized at the state level to ensure that the public has access to shore and waterfront areas. The Division of Coastal Resources, through the New Jersey Coastal Zone Management Program, administers several coastal permit programs and incorporates a specific requirement for public access. Municipalities may use their land use planning powers to secure public access to the waterfront in their towns.

The Coastal Development Permit. Coastal Area Facility Review Act (CAFRA), N.J.S.A. 13:19-1 et seq., the Wetlands Act, N.J.S.A. 13:9A-1 et seq., and the Waterfront Development Law, N.J.S.A. 12:5-3, are administered by the Division of Coastal Resources. Permits are issued subject to the Rules on Coastal Resources and Development (the Rules), N.J.A.C. 7:7E-1 et seq.

Among the Rules, which deal with many aspects of coastal development, are a series of policies regarding "public access to the waterfront" (N.J.A.C. 7:7E-8.11). Public access is defined as "the ability of all members of the community at large to pass physically and visually to, from and along the ocean shore and other waterfronts."

Ten specific policy statements within the Rules address the need to provide access. These are re-printed on the next page.

1. Coastal development adjacent to all coastal waters, including both natural and developed waterfront areas, shall provide perpendicular and linear access to the waterfront to the maximum extent practicable, including both visual and physical access. Development that limits public access and the diversity of waterfront experiences is discouraged.

2. All development adjacent to water shall, to the maximum extent practicable, provide, within its site boundary, a linear waterfront strip accessible to the public. If there is a linear waterfront accessway on either side of the site and it is not feasible to continue it within the boundaries of the site, a pathway around the site connecting to the adjacent parts, or potential parts of the waterfront path system in adjacent parcels shall be provided.

3. Municipalities that do not currently provide, or have active plans to provide, access to the water will not be eligible for Green Acres or Shore Protection Bond funding.

4. Public access must be clearly marked, provide parking where appropriate, be designed to encourage the public to take advantage of the waterfront setting, and must be barrier free where practicable.

5. A fee for access to, including parking where appropriate, or use of publicly owned waterfront facilities must be no greater than is required to operate and maintain the facility and shall not discriminate between residents and non-residents except that municipalities may set a fee schedule that charges up to twice as much to non-residents for use of marinas and boat launching facilities for which local funds provided 50 percent or more of the costs.

6. All establishments, including marinas and beach clubs, which control access to tidal waters shall comply with the Law Against Discriminating, N.J.S.A. 10:5-1 et seq.

7. Public access, including parking where appropriate, shall be provided to publicly-funded shore protection structures and to waterfronts created by public projects unless such access would create a safety hazard to the user. Physical barriers or local regulations which unreasonably interfere with access to, along or across a structure are prohibited.

8. Development along the Hudson River must conform with The Hudson River Walkway: Plan and Design Guidelines, a report prepared by Wallace, Roberts and Todd for NJDEP, 1983 and which may be obtained from the Department's Division of Coastal Resources.

9. Development adjacent to coastal waters shall provide fishing access within the provision of public access wherever feasible and warranted.

10. Development adjacent to coastal waters shall provide barrier free access within the provision of public access wherever feasible and warranted by the characteristics of the access area.

Source: "Rules on Coastal Resources and Development" (N.J.A.C. 7:7E-8.11)

Any development along the shore or waterfront is subject to these policies. Any coastal permit issued will generally be conditioned upon provision of public access to the waterfront.

Municipal Actions may serve to provide and protect access to waterfront areas through planning and zoning. Municipal government may adopt land use ordinances which require all waterfront property owners to provide access along the water's edge.

In addition, waterfront land may be zoned for uses which would not interfere with public access, and the open space portion of any development within these zones could be required to be placed along the waterfront. These types of municipal conditions could be enforced through the subdivision and site plan approval process.

FINANCING PUBLIC ACCESS

General Obligation Bonds are a traditional source of revenue used by municipalities to develop parks, schools and other public facilities. Bonds are instruments by which the government borrows money from investors and pays the principal and interest over a number of years, similar to a loan. Through this method, the taxing power of the jurisdiction is pledged to pay interest and principal to retire the debt of the bond.

State Funding programs are available through the State's Department of Environmental Protection for acquisition and development of recreation lands. All state-funded projects are subject to a public access requirement.

Green Acres oversees the Green Trust which makes low interest loans and grants available to counties and municipalities for the acquisition or development of open space for public recreation. An interested community must complete an application, detailing their current open space and recreation inventory, and illustrating their proposal for a new or revitalized park element.

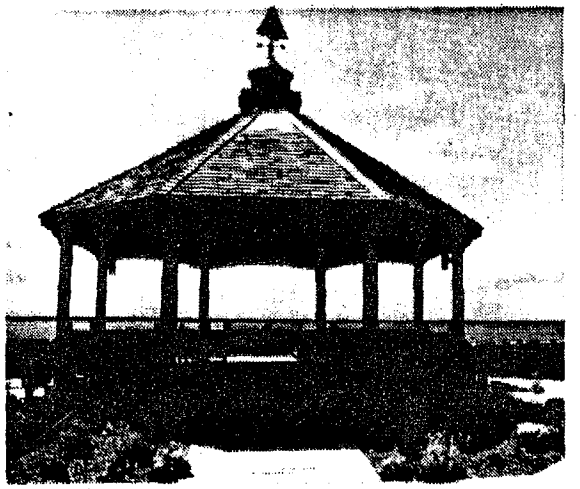
Funding decisions are based on greatest open space need and imaginative recreation solutions. Parks with waterfront access receive a priority rating. Any municipality or county which enters into a contract with Green Acres is required to provide public access to the lands developed or acqui[illegible] with these public funds. Over 20 mi[illegible]n dollars was awarded in the 1987 f[illegible]cal year.

Boardw[illegible]s in Wetlands — The Open Lands Manage[illegible]nt Program provides funding for private pr[illegible]erty owners to develop amenities which w[illegible] make their land more accessible for outdoor [illegible]creation.

The Office of Natural Lands Management recently began an innovative pilot project known as the Open Lands Management Program. The Program enables private property owners to make their land available to the public for outdoor activities, while receiving funds from the State to develop and maintain the property. The money is to be used to facilitate outdoor recreation and eliminate potential problems and hazards for the property owner.

The funding may be used for installing fences, providing parking, planting trees and shrubs, building recreation facilities such as boat launches, or stocking a fish pond. In addition, the money can be used to pay for liability insurance, associated legal costs, and maintenance.

Under the Open Lands Management Program, an "access covenant" is drawn up between the State and the landowner which specifies how the funds may be spent and the period of time of the agreement. The land always remains in private ownership and renewal of the covenant is entirely up to the landowner.



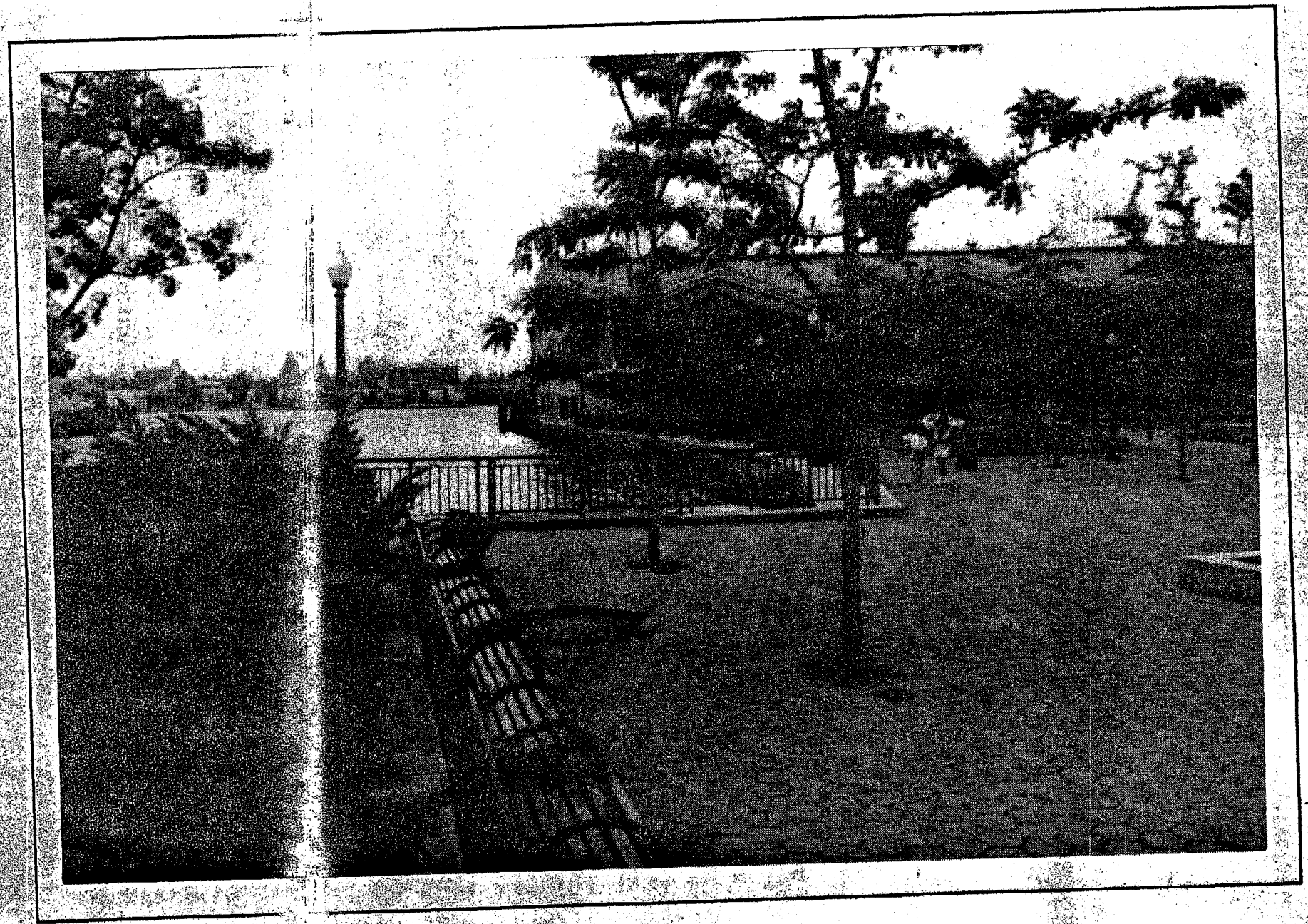
Gazebo — The recreation component of the municipal master plan should include waterfront parks.

Land Trust Organizations exist primarily to preserve and conserve tracts of valuable open space for recreation. The scope of a particular trust may be broad or narrow. It may be organized at a state, regional, national or international level. One common key element of all land trusts is their non-profit status. Gifts of land or money to these entities may, therefore, be tax deductible.

Among the national and international land trusts, The Trust for Public Land and The Nature Conservancy have been actively pursuing projects in New Jersey. At the state level, the New Jersey Conservation Foundation is dedicated to the preservation of valuable open space specifically within New Jersey. Other trusts may be committed to preservation of a particular type of resource, such as historic structures and landscapes. Civic organizations and concerned citizens often form local trusts in order to preserve some aspect of their community.

Land trusts acquire property primarily through three methods — (1) direct gifts, (2) grant money, and (3) direct purchase with monies raised through the trust's fundraising activities. Corporations or developers may choose to donate lands to a land trust in order to gain the substantial tax benefits. In turn, some trust organizations act as an intermediary, selling or giving the land immediately to a public agency for maintenance, while others retain the land and maintain it for recreation or conservation purposes.

Chapter 4
Design Guidelines



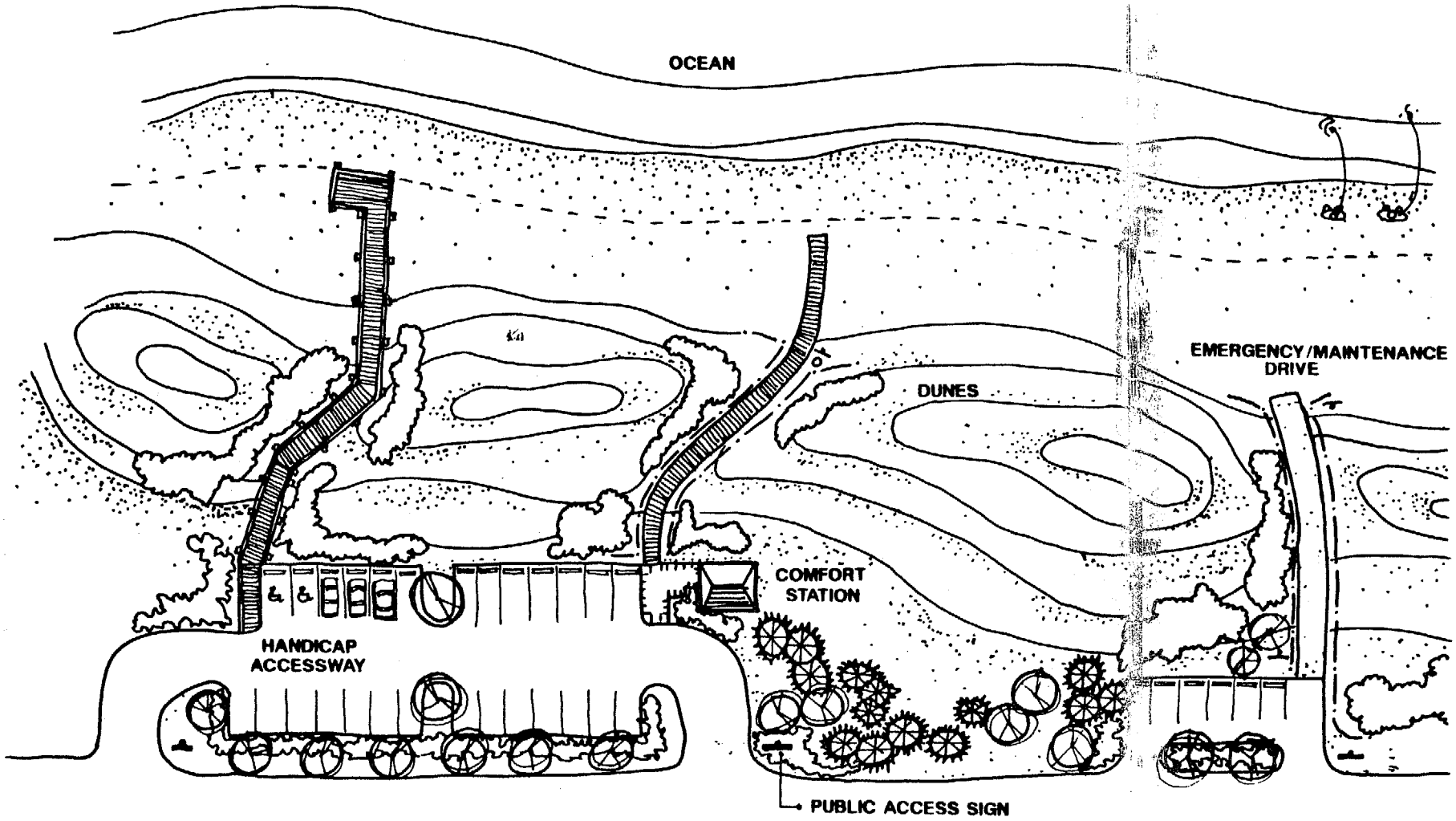
OCEANFRONT — NATURAL SHORE

Design Philosophy

Public access to the wet sand beach should be provided along the coastline of the state. The more comfortable and convenient the access, the more useful it will be to the public. The primary objective on a natural shore is to control pedestrian and vehicular access. Many sites will have sensitive natural environments that must be protected from overuse. The means of control must address the dynamic processes of dunes, native vegetation and drainage.

The ocean dunes are an aesthetic, ecological, and economic resource. Access across the dunes must be restricted to preserve the delicate ecology of the dune system. Protection and preservation of dunes is vital for protecting adjacent landward areas from the effects of major coastal storms. Structures, such as dune walkovers, provide access to the waterfront while considering the sensitive nature of the dune system (refer to the "Special Design" section in this chapter).

LEGEND



OCEAN - NATURAL SHORE

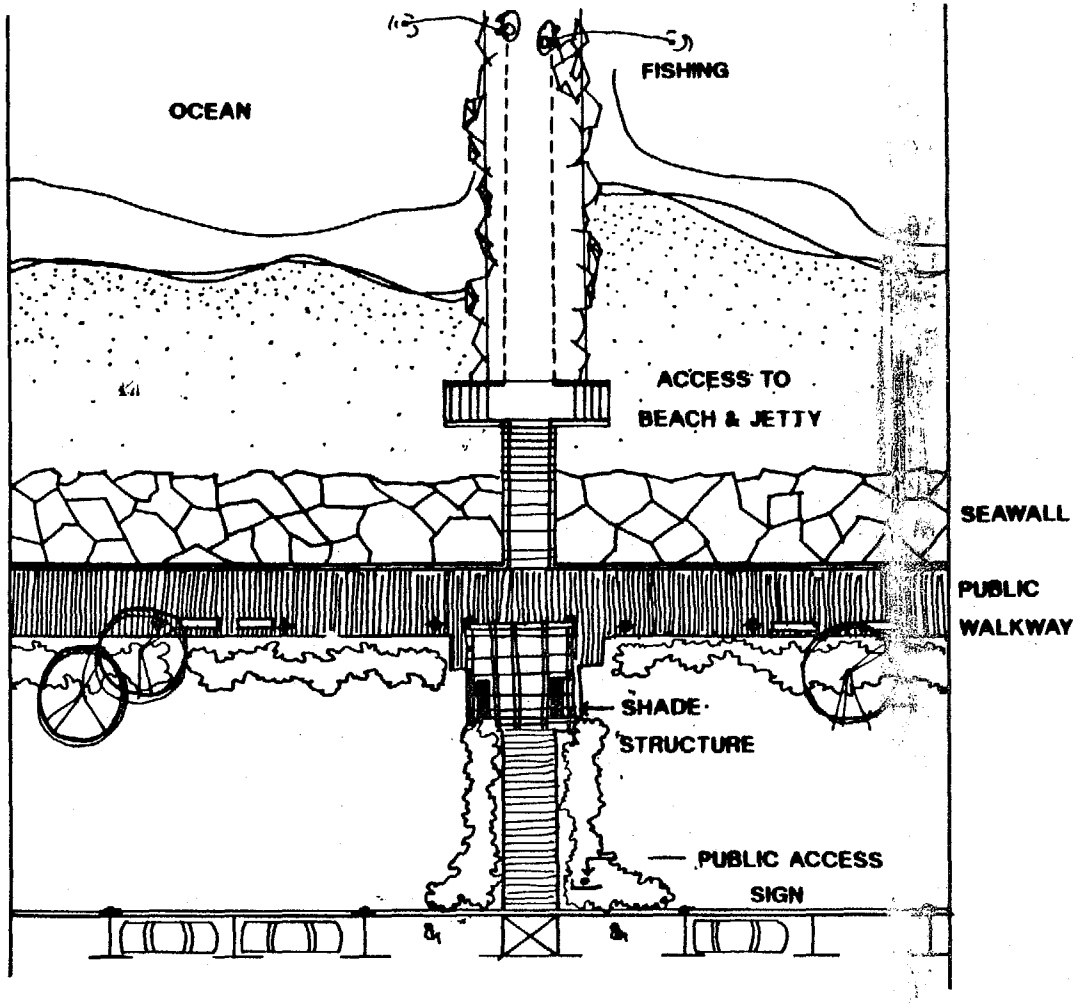
Design Elements

Access

- Provide access to the w sand beach with the least a unt of disturbance to the atural shore.
- Control access with sno fence, post & rail fence, elevate dune walkovers, wood plank ats.
- A gravel or compacted il base can be used for ve icular access.
- Vehicular access shoul e provided for maintenance trucks and emergency ve icles. Recreational vehicles uch as RV's and boat trailers for offshore sailing should be accommodated where possib
- Handicapped access ust be provided with dune w lkovers and decks at the beach nd.
- All public accessways hould be designated clearly wit signage.

Facilities

- Site furnishings should be provided at areas that will accommodate a large number of visitors.
- Adequate restrooms, showers, and comfort facilities should be provided.
- In parks or private developments that provide more that one accessway to the natural shore, handicapped access should be provided at those points that have dune walkovers or other improved, passable walkways. Every site must provide for handicapped access.



OCEAN - SHORE PROTECTION STRUCTURES

OCEANFRONT - SHORE PROTECTION STRUCTURES

Design Philosophy

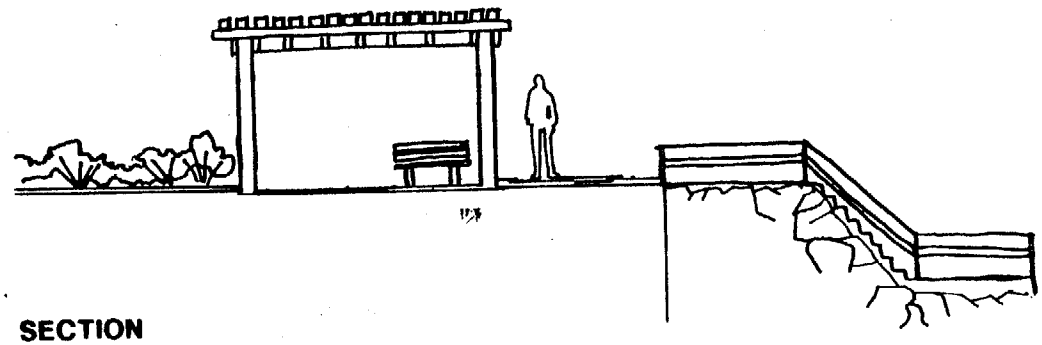
Although it is desirable to strive to preserve a natural shoreline it is not always possible. When shore protection devices are necessary non-structural solutions to shoreline erosion problems are preferred over structural solutions. The design concept presented here is applicable where a non-structural approach is not feasible or a shore protection structure is already in place. Key elements of this type of situation are as follows:

- Structure protects a water dependent use or public recreation from erosion.
- It is consistent with the New Jersey Shore Protection Master Plan.
- Stone rip-rap and sloped concrete revetments which allow vegetation are preferred over bulkheads.

(N.J.A.C. 7:7E - 7.11 (e) Structural Shore Protection, pp. 189-190).

"Public access, including parking where appropriate, must be provided to publicly funded shore protection structures and to waterfront land created by public projects, unless public access would create a safety hazard to users. Physical barriers or local regulations which unreasonably interfere with access to, along, or across a structure are prohibited "

(N.J.A.C. 7:7E - 7.11 (e) 1 iv, p. 190).



SECTION

Design Elements

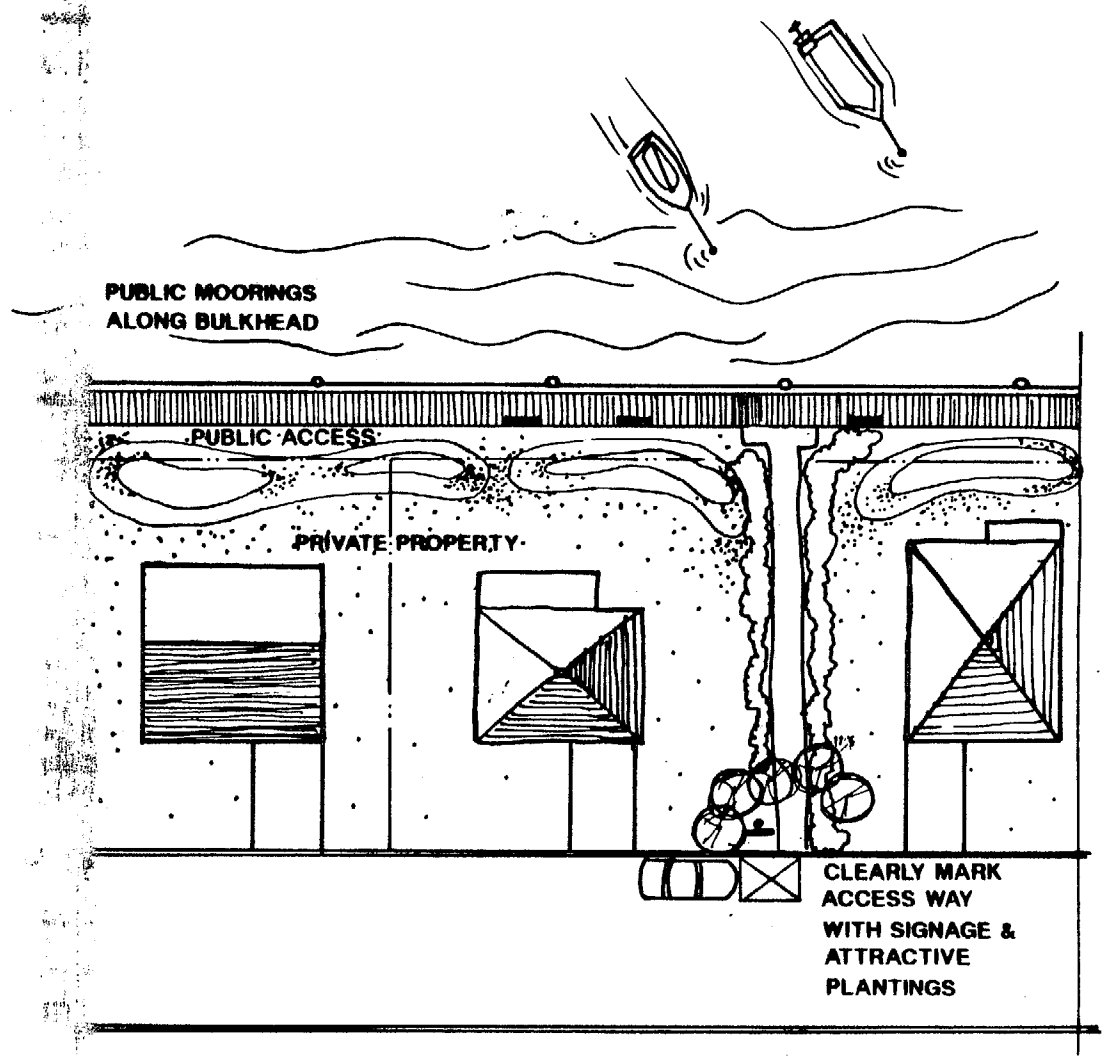
Facilities

- Provide shade structure, seating, lighting, litter control, and landscaping (native seashore plantings).

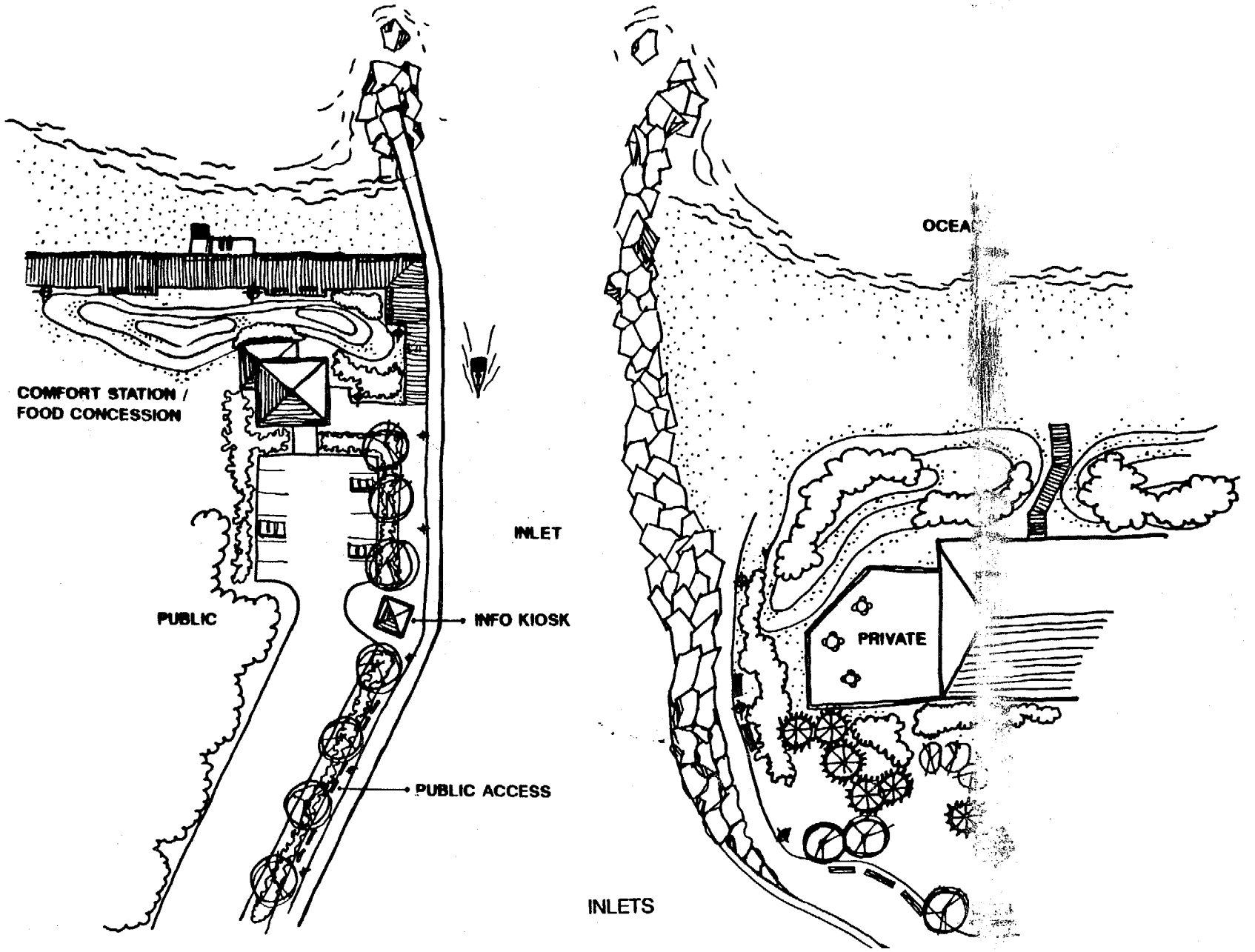
Access

- Provide access to beach and jetty from top of structure.
- Screen linear accessways with berms and low plantings where they abut private property.
- Screen perpendicular accessways with a low evergreen hedge where they abut private property.
- Clearly mark entrance to accessways with signage and attractive plantings.

Shore protection structures may be acceptable when they pr[illegible] a water dependent use or recreation area from erosion. Non-structural solutions to sho[illegible]line erosion are preferred.



OCEAN - SHORE PROTECTION STRUCTURES


COMFORT STATION /
FOOD CONCESSION
INLET
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OCEA
PRIVATE

INLETS

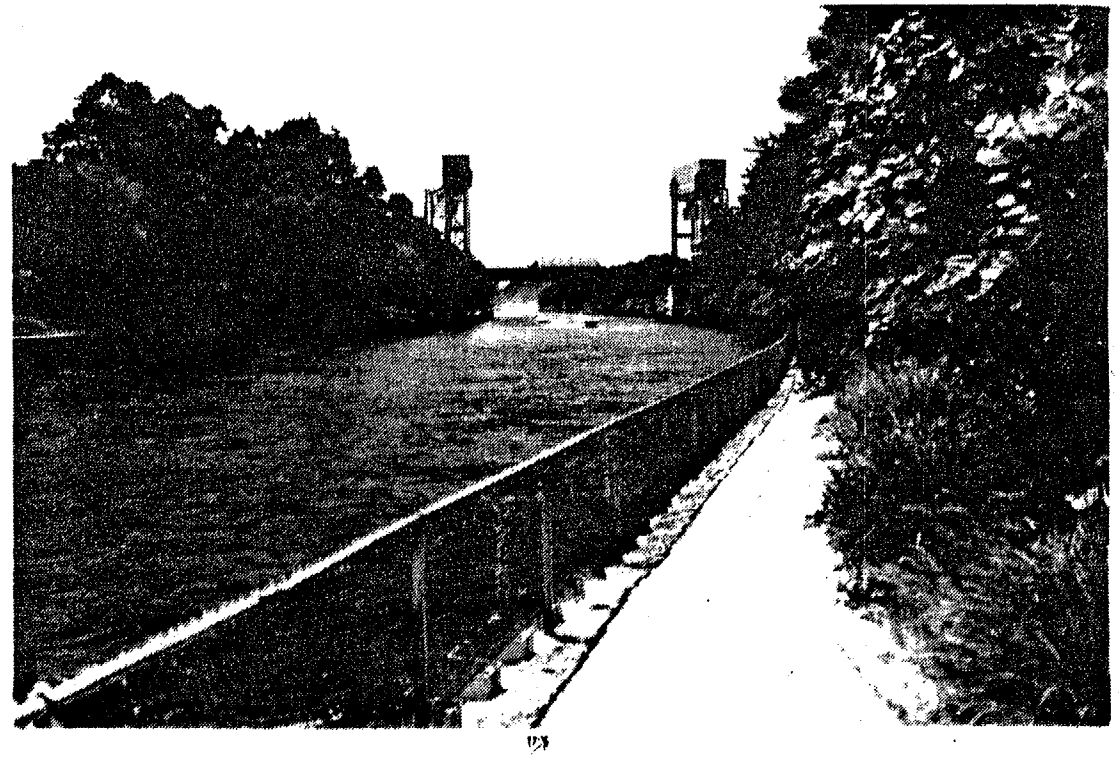
INLETS

Design Philosophy

Inlets are narrow water passageways between peninsulas or through a barrier island leading to a bay or lagoon. Inlets are a center of activity for participants and spectators. People are drawn to them because of the constant parade of boats or for the feeling of being at the very end of the land. These edges may be natural with vegetation or with shore protection structures along existing development.

Where publicly funded shore protection structures are built, a public accessway is required. Accessways, along inlets, should connect with linear walkways along the oceanfront, where possible. Site amenities such as seating, lighting, trash receptacles, landscaping, parking and a comfort station/food concession should be provided. The parking area may be located perpendicular to the walkway, separated by low shrubs, to provide visual access for passengers during the winter months.

Along private development a public access easement may be provided to adjacent accessways and the water's edge. These accessways should be well lit, provide ample seating, and be wide enough to accommodate bicyclists and pedestrians. A buffer, landscaping, berms, grade change, or decorative fence, should be provided to separate the public and private areas. Signage posted at critical points could indicate the limit of public access.



Physical and visual contact with the water can be maximized by developing accessways parallel to inlets.

Design Elements

Access

- Limit access from private areas to public areas to a few designated points. Clearly highlight these areas as focal points along the public accessways with signage, plantings and street furnishings.
  Provide access parallel and perpendicular to the waterfront.
- Maintain visual access. Avoid obstructing views with excessive plantings or structures.
- Accessways through natural wetlands or other sensitive areas should present the least disturbance practicable using walkovers and winding around existing vegetation.
- Obstructions to the channel, such as docks or moorings, are not permitted.
- Minimize disturbance to natural shores; control access in these areas.

Parking

- Provide public parking spaces at entrance to public accessway or easement.
- Separate public from private parking and post signage designating public spaces.
- Provide parking along inlet where possible to encourage year-round enjoyment of inlet views.
- Minimize signage - use other more subtle ways to delineate public and private space.

Facilities

- Site furnishings such as benches, pedestrian scale lighting, litter receptacles, drinking fountains, and public telephones should be provided along public accessways. Additional elements such as restrooms, food concessions, shade structures and picnic areas may be included.
- Design should improve upon, or be consistent with, existing elements on site and in adjacent public accessways.
- Adequate restoom and comfort facilities should be provided.

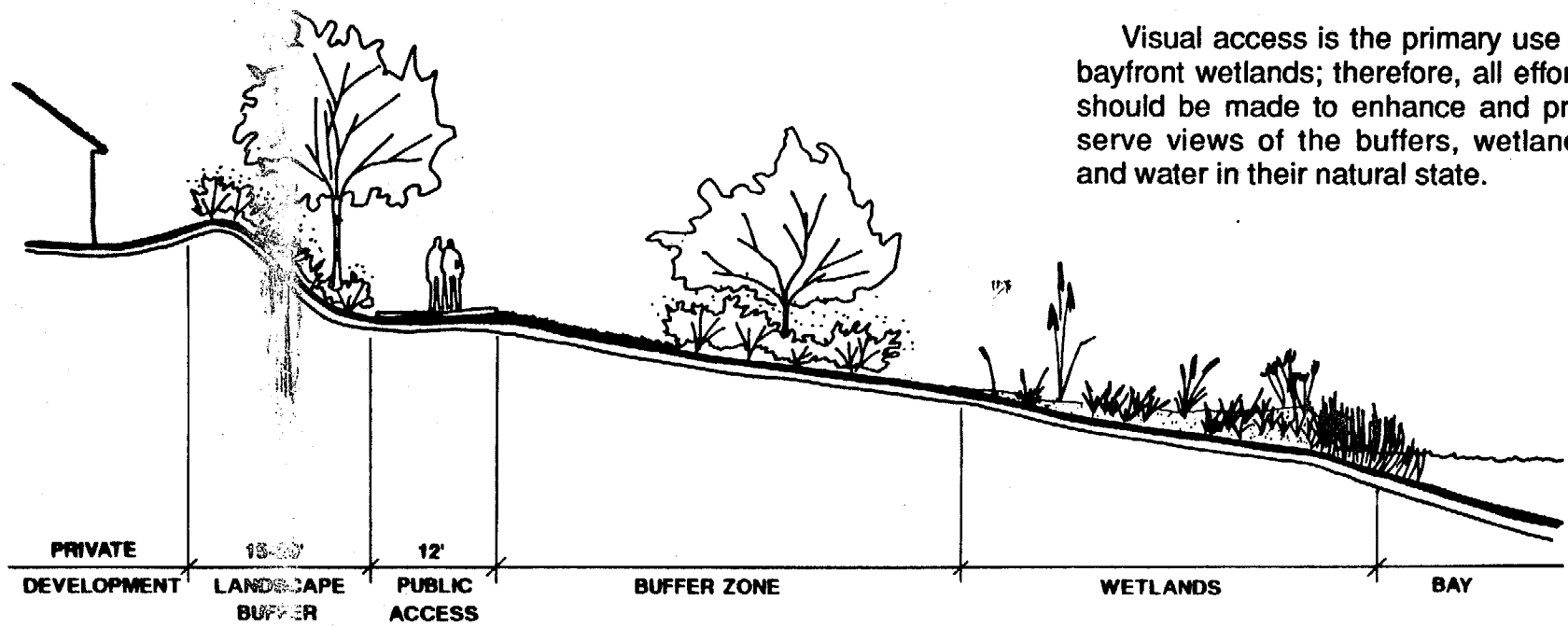
BAYFRONTS - WETLANDS

Design Philosophy

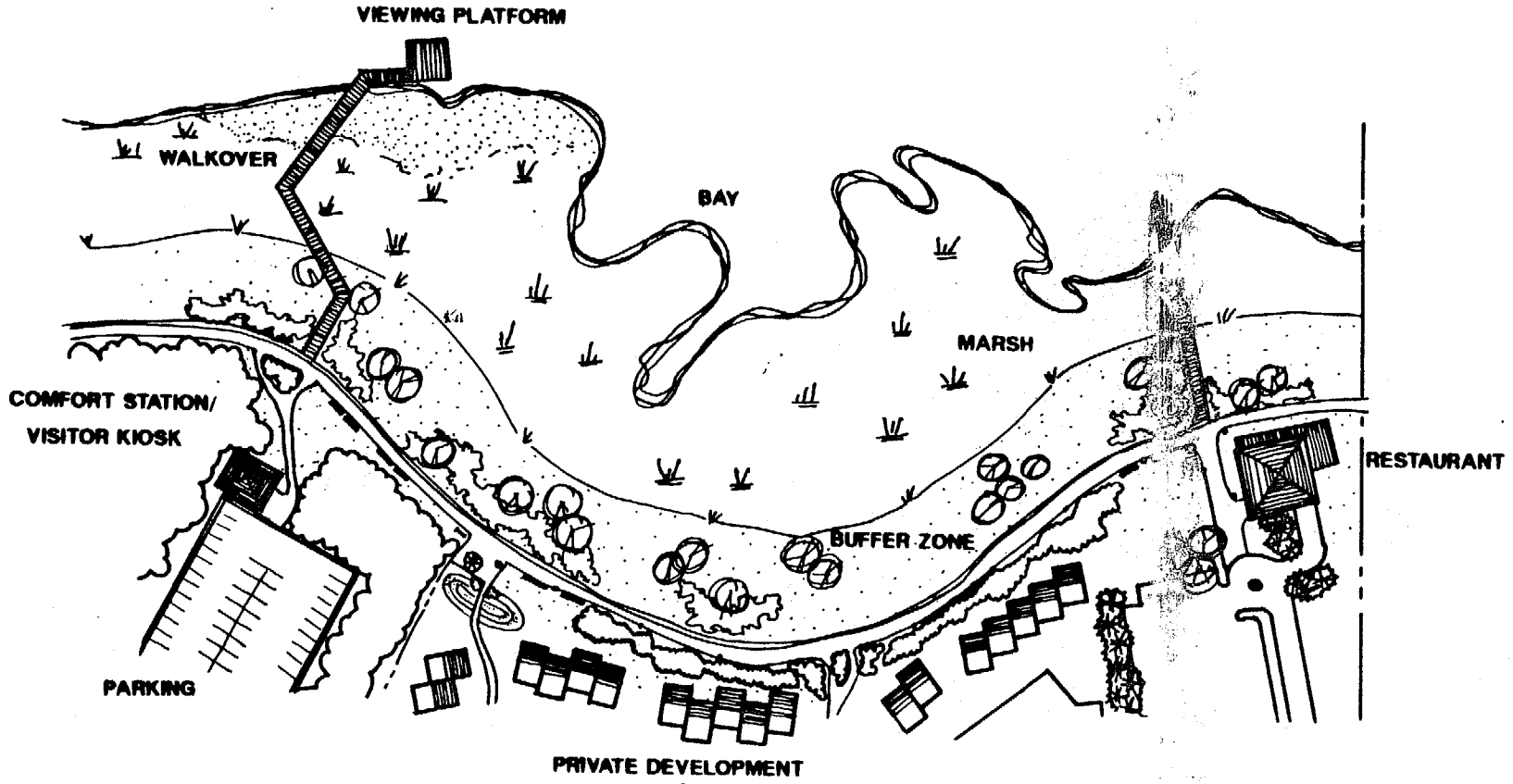
Coastal wetlands areas are the most environmentally valuable land areas within the coastal zone. They fill a valuable role in maintaining water quality, stabilizing the coastal zone, and providing a critical habitat for plants and animals and a vital transition area between land and water. For these reasons, it is crucial to protect the wetlands while encouraging the enjoyment of this valuable resource. An access corridor should be sought that will allow access to, along, and through bayfront wetlands to the maximum extent practicable with the minimum disturbance possible. All development, public and private, must consider the sensitivity of this critical environment.

Public access through the wetlands may provide educational and passive recreation needs. A wooden walkover to the water's edge, and possibly a decked overlook, would allow people to enjoy the variety of flora and fauna available in wetland environments.

Visual access is the primary use of bayfront wetlands; therefore, all efforts should be made to enhance and preserve views of the buffers, wetlands and water in their natural state.



BAYFRONT - WETLANDS



BAYFRONT WETLANDS

Design Elements

Views of the water across the wetlands are the primary form of access at this type of waterfront. Improvements in bayfront wetlands should be designed to preserve and enhance these valuable views.

Wetlands

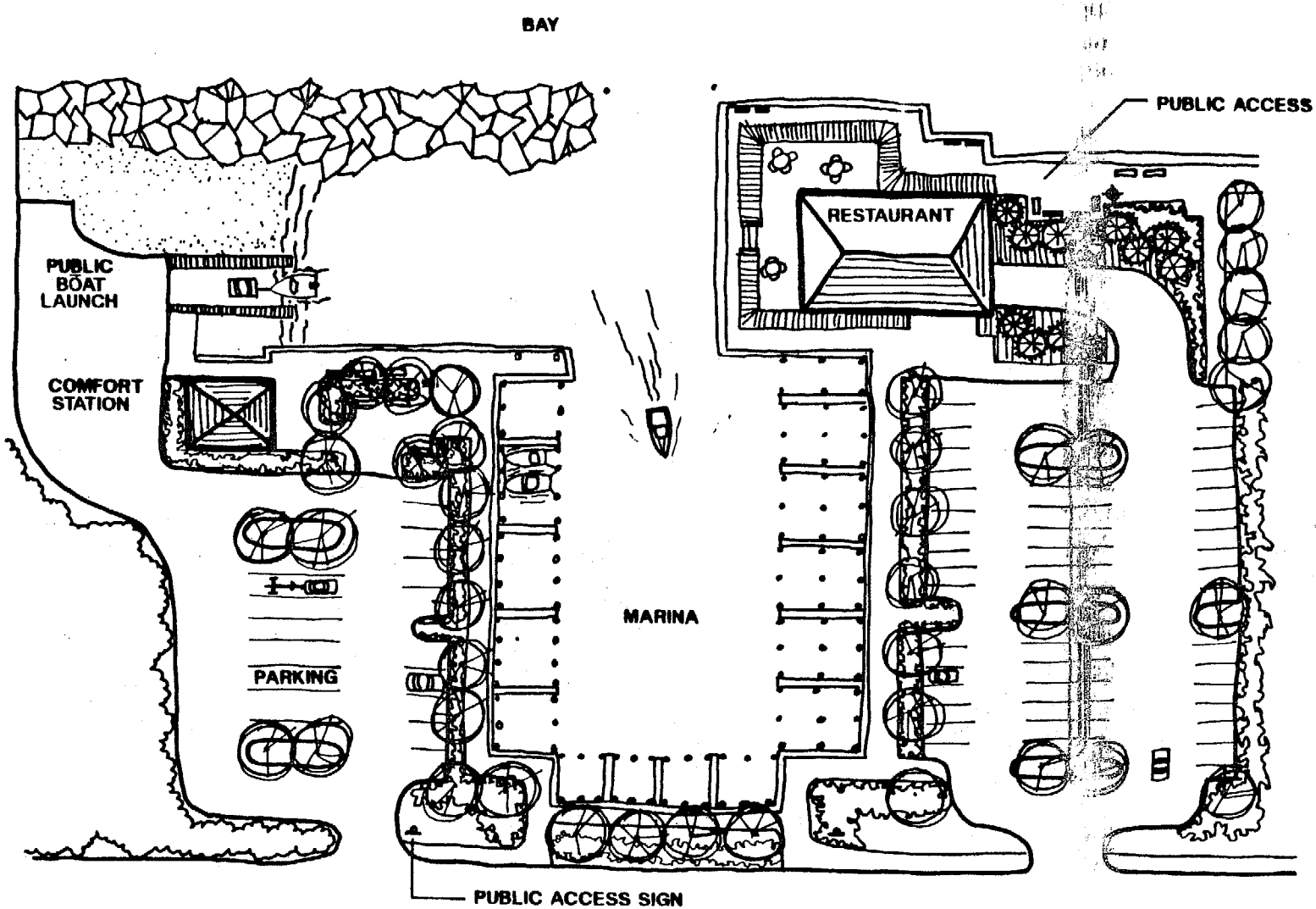
- Any construction in the wetlands must be for a water dependent use.
- A buffer line, or wetlands limit line, must be clearly delineated by elements such as parallel accessways, change in vegetation, or change in elevation.
- The buffer zone should be vegetated with native plants.

Access

- Provide access perpendicular and parallel to the waterfront.
- Link new development with adjacent waterfront accessways wherever practicable.
- A clear delineation of spaces is necessary where public accessways cross private development. Design elements such as berms, plantings of native vegetation, changes in paving or elevation, decorative fences or walls, may provide an attractive separation.
- Walkovers through the wetlands should be no more than 6 feet in width to minimize coverage over vegetation and benthic habitats.
- All areas should be handicapped accessible.
- Provide bicycle access along linear accessways.
- Create nodes along linear pathway for pedestrians.

Facilities

- Improved walkway surfaces, litter receptacles, benches, pedestrian scale lighting where appropriate, signage, parking, and handicapped access should be provided.
- All public sites should accommodate "day trippers" with elements such as parking, restrooms, handicapped access, public telephones, picnic areas, an educational center or nature walk, and bicycle racks.
- Structures that provide shade, such as picnic shelters, gazebos, arbors and pergolas, allow visitors to gather and rest. They can be used at focal points along linear accessways and at intersections between private and public spaces.



BAYFRONT - FILLED WATER'S EDGE

BAYFRONT - FILLED WATER'S EDGE

Design Philosophy

"The water's edge along . . . New Jersey's shore, bays and rivers is a highly valued, yet limited, resource. Waterfront locations offer a rare combination of natural features and opportunities for waterborne commerce and recreational boating." (Policy NJAC 7:7E - 3.16 Filled Water's Edge)

The filled water's edge provides a valuable opportunity to get right next to the water without endangering environmentally-sensitive areas. Although future filling along waterfronts is not encouraged, those areas which exist offer tremendous possibilities for waterfront recreation and access, and should be designed to take maximum advantage of the water's edge.

Design Elements

Since waterfronts with filled edge are limited and especially valuable for expanded water access, only those uses which take maximum advantage of such a location should be developed. Only water dependent or water-oriented uses should be permitted along the filled water's edge. All development along this valuable shoreline should provide uninterrupted waterfront public access where possible.

Water dependent uses

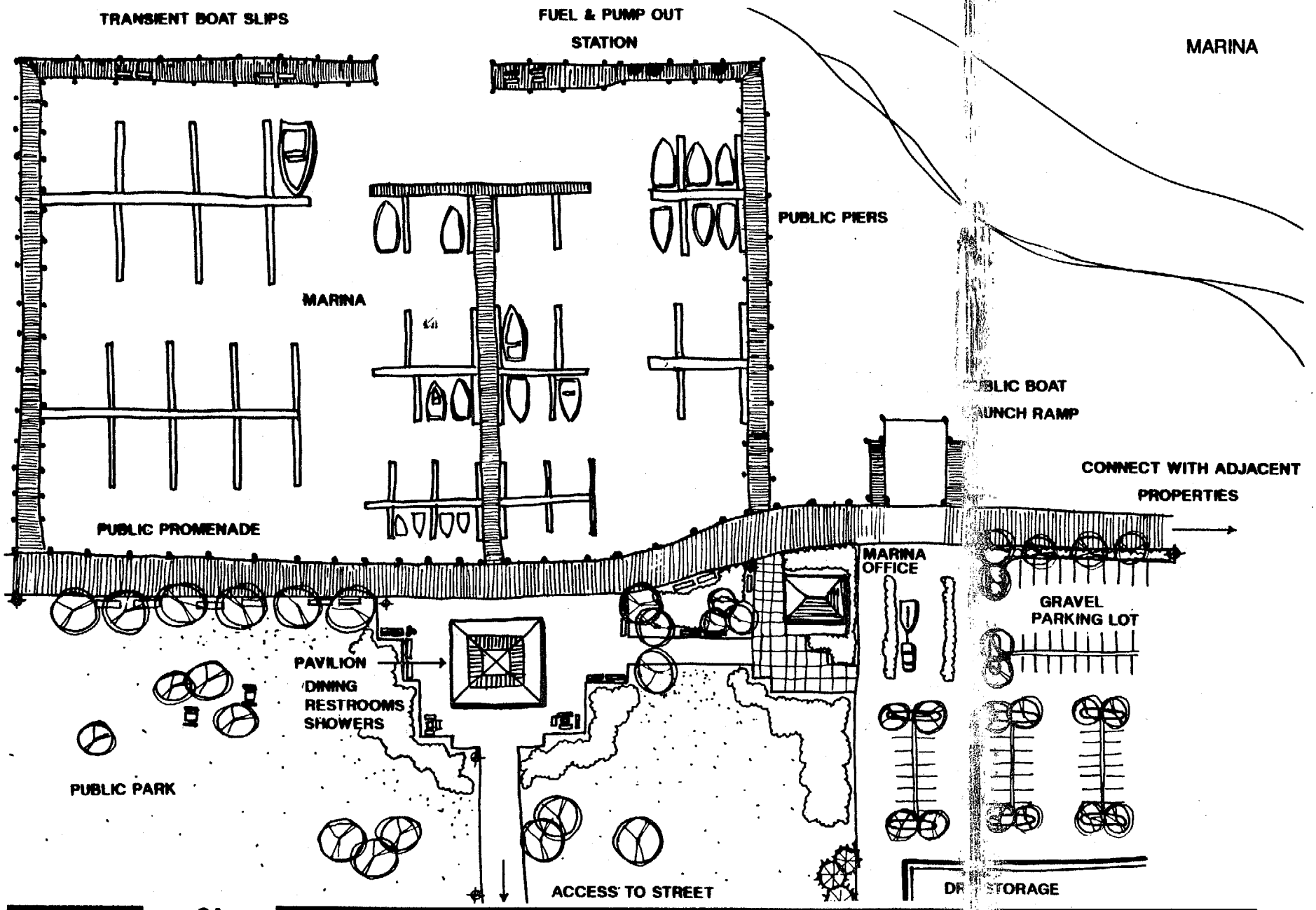
- marina activities requiring access to the water, such as the commissioning and decommissioning of new and used boats;
- boat repairs and short term parking for boats;
- storage of boats that are too large to be transported feasibly by car trailer;
- rack systems for boat storage;
- industries such as fish processing plants and other industries which receive and quickly process raw materials by ship;
- commercial fishing operations;
- port activities requiring the loading and unloading of ships;
- water oriented recreation.

Water oriented uses

- developments that serve the general public and provide direct access to the water;
- hotels or restaurants which takes full advantage of the waterfront location;
- assembly plants which utilize water-borne transport of materials.

Certain uses do not encourage public access and should not be located at the filled water's edge, such as:

- housing;
- hotels & motels;
- warehouses;
- manufacturing facilities (except those which receive and quickly process raw materials by ship);
- dry boat storage for small boats;
- long-term parking & automobile junkyards;
- parking lots;
- non-water oriented recreation such as roller rinks and racquetball courts.


TRANSIENT BOAT SLIPS
FUEL & PUMP OUT
STATION
MARINA
PUBLIC PIERS
MARINA
PUBLIC PROMENADE
BLIC BOAT
UNCH RAMP
CONNECT WITH ADJACENT
PROPERTIES
MARINA
OFFICE
GRAVEL
PARKING LOT
PAVILION
DINING
RESTROOMS
SHOWERS
PUBLIC PARK
ACCESS TO STREET
DR STORAGE

MARINA

Design Philosophy

A marina performs at least two key functions: it provides docking space for boats and, more importantly, it affords people the opportunity to immerse themselves actively in a lively water environment. The most desirable location for a marina is adjacent to a waterfront park. The relationship of park to marina allows a full-range of stimuli — the excitement and thrill of watching boating activity, the extension of open space, and beautiful views. The least desirable place for a marina would be near heavy industrial areas or environmentally sensitive lands (i.e., wetlands).

A full scale marina has an array of components: public/private piers, breakwater, boat launch, dry storage area, fuel dock, pump-out, parking, marina shop-office, restaurant/ restroom facilities and numerous site amenities. Although the actual layout of a marina is variable, the relationships between certain elements must be maintained. For ease of circulation, the boat launch, parking area and dry storage building should be located near each other. The marina office may be situated near those three elements for potential boat rentals/sales and security reasons.

A park pavilion or restaurant with public restrooms should be centrally located. As with any public place, all facilities must be handicap accessible. A pleasantly landscaped seating area would be ideally located near this public structure. Seating should be provided on the public piers, along the waterfront promenade, near the marina office and restroom facilities. Other site amenities such as lighting, trash receptacles, and landscaping create a more comfortable environment for pedestrians and limit potential problems.

An important issue to consider when designing piers is the interface of public and private space. Rather than resorting to offensive fences and gates, subtle manipulations of elevation and widths of decking can be used to deter the public from using more private sections of the marina. If a pier designated for public use extends far into the water and allows visual contact with marina life, then the potential conflict between public and private space may be avoided.

Design Elements

Public Boat Launch

- Locate adjacent to parking area
- Should not interfere visually or physically with pedestrians
- Slope for ramp 12% - 15%
- Warning barrier (gate)

Parking

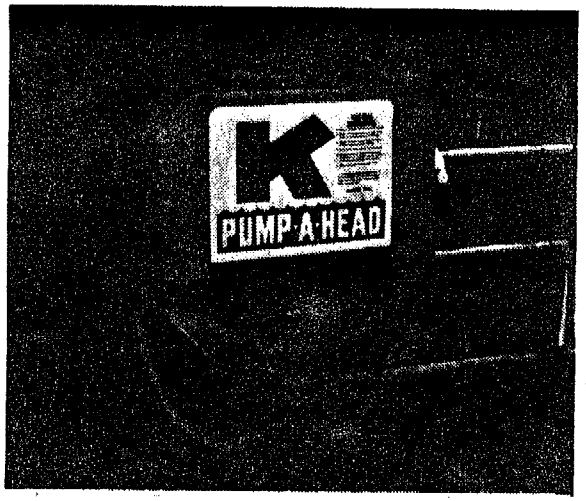
- Locate no more than 500' - 600' from piers
- Recommend 0.6 to 0.8 spaces per boat slip
- Boat trailer parking
- Porous pavement preferred
- Landscaping- shade trees, shrubs
- Direct access to boat launch area for easy maneuvering

Dry Storage Area

- Locate at far end of marina site
- Landscape to soften appearance of building mass
- Receptacles for toxics, i.e. oil.

Fueling Area

- Locate away from boat slips
- Minimum 2 boat stacking
- Fuel dock shelter



New or expanded marinas must include adequate pump-out facilities.

Pump-Out

- Provide at least 1 pump-out at every public marina
- Provide pump-out facilities on a regional basis according to the demand
- Locate away from boat slips
- Locate where transient boats may use (e.g. at fuel dock).

Public Park Facilities

- Adjacent to marina
- Picnic areas

- Public restroom facility (may be shared with marina)
- Food concession (may be shared with marina)
- Site amenities — benches, lighting, trash receptacles, landscaping

Marina

- Office located near entrance to marina
- Boat rentals and sales
- Food concession/restaurant

Decks & Piers

- Public piers minimum 6' wide
- Private piers should be 4' wide
- Indicate separation of public and private space by grade change, decreasing width of piers and signage.
- Breakwater maximum 6' wide with tie-up for transient boaters
- Provide benches on public piers where space allows
- Public promenade along water's edge — minimum of 12' wide
- Provide ample seating and trash bins
- Lighting — pedestrian scale and bollards

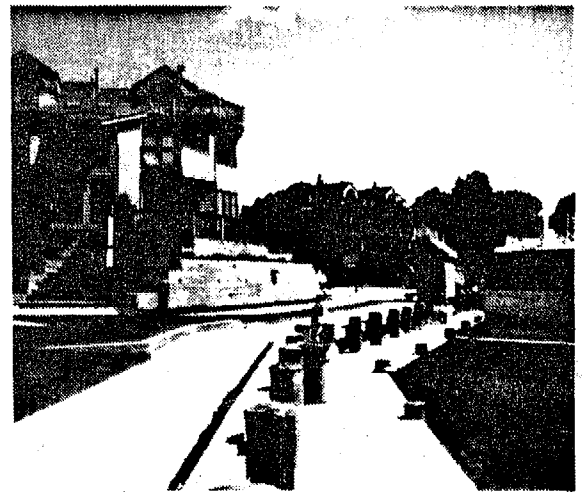
MARINA WITH UPLAND DEVELOPMENT

Design Philosophy

Marinas attract great numbers of people; both boaters and non-boaters. The excitement of marine activity and the innate quality of the water are natural attractions for the public. When private lands abut a marina, special provision must be made to ensure public access to this valuable waterfront resource.

In the case of adjacent residential property, there is a potential conflict of use. The interface of public and private space can be managed effectively through careful, thoughtful design. The building configuration could be manipulated in a way that private space is contained and easily defined, while views of the public waterfront are maximized. Subtle grade changes, landscaping and discrete walkway layout could be used to delineate public space.

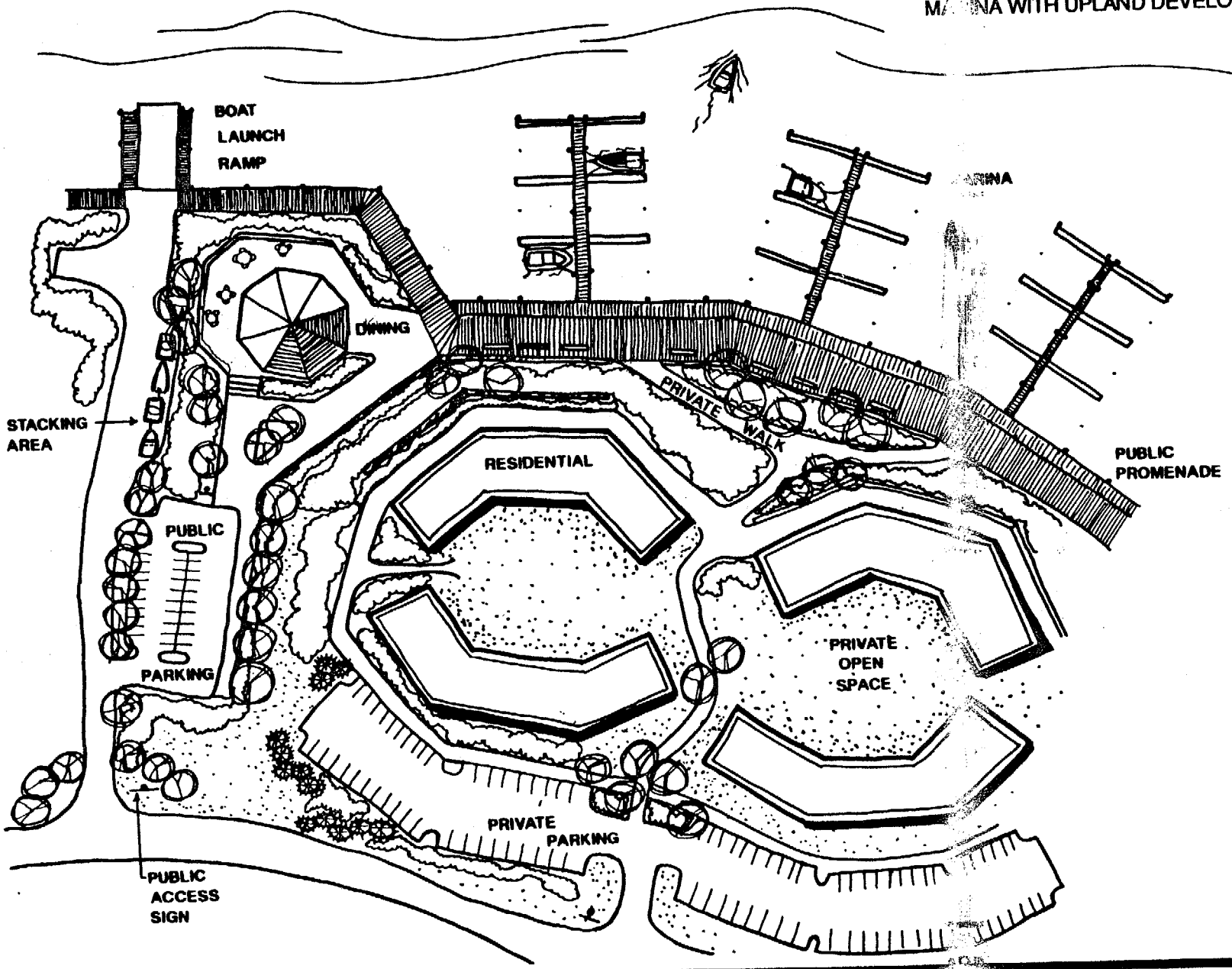
Marina facilities, boat launches, parking, restaurants, office and rest rooms, should be grouped together and buffered from the upland development.



Innovative design solutions should be utilized to create separation of public and private spaces, without intrusive fencing or signage.

Public and private spaces within the marina can be delineated using similar techniques.

MARINA WITH UPLAND DEVELOPMENT



Design Elements

Residential

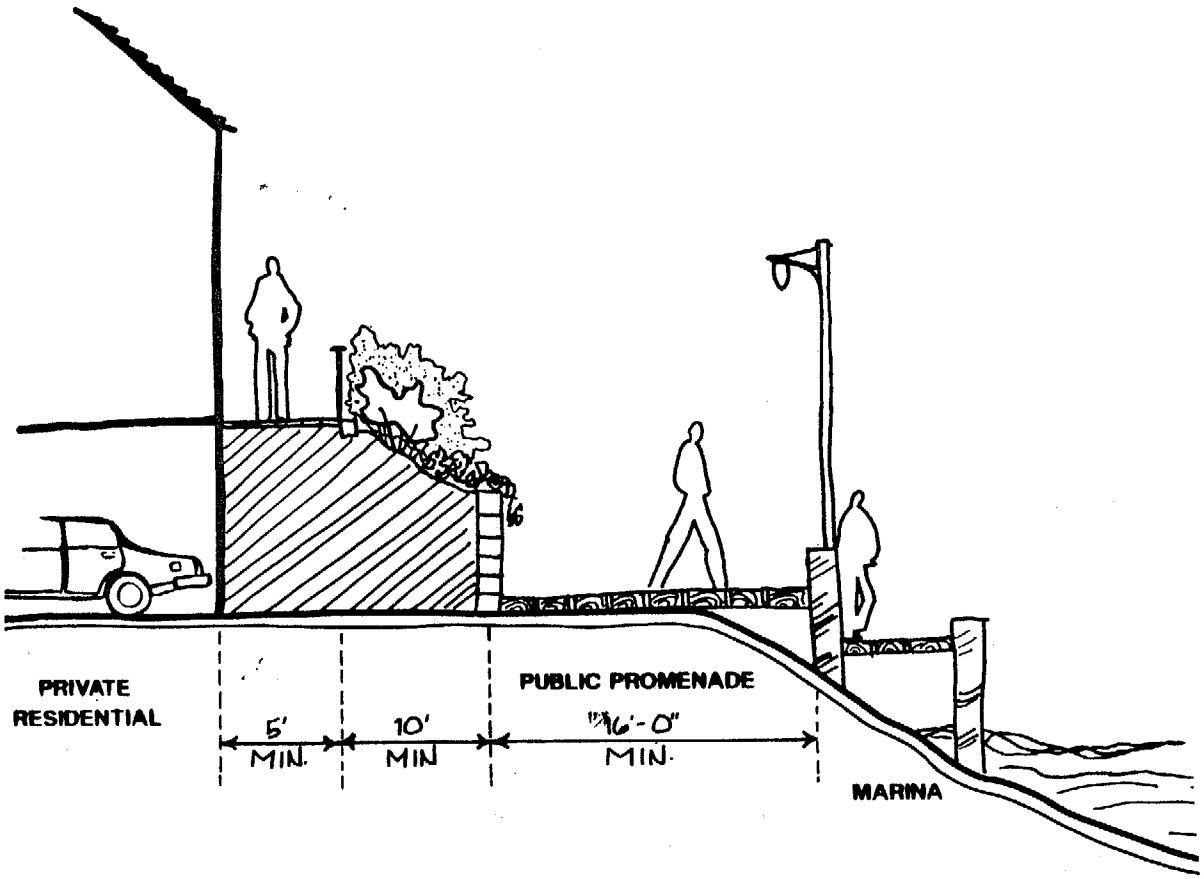
- Separate public and private spaces using grade changes, landscape buffers, and subtle entry points.
- Buffer should be a minimum of 10 to 15 feet wide.
- Private open space should be inwardly focused.

Public Boat Launch

- Locate adjacent to parking area
- Should not interfere visually or physically with pedestrians
- Warning barrier (gate)
- Provide stacking distance and turn around for a minimum of 2 cars/boat trailers.

Parking

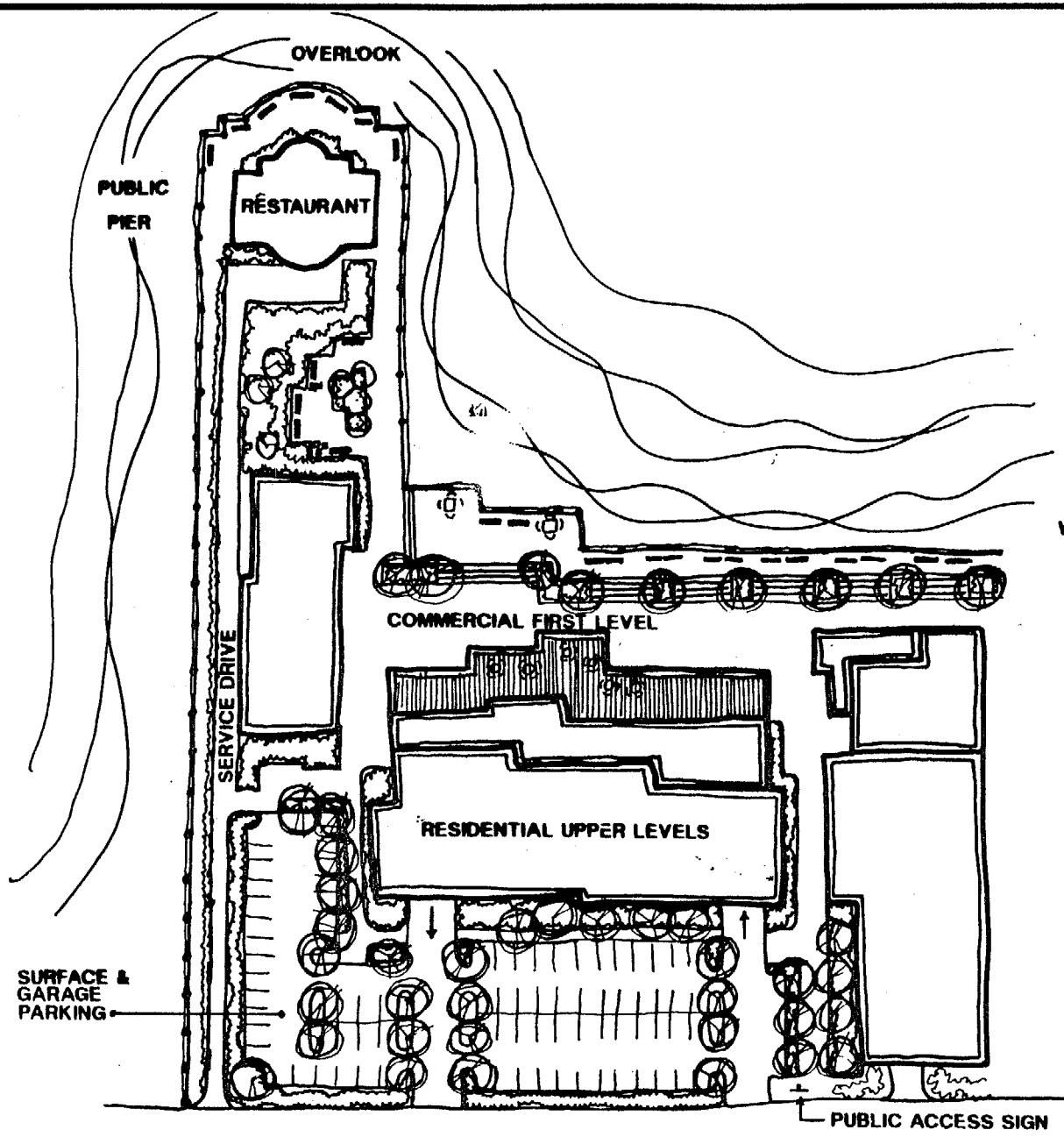
- Porous pavement preferred.
- Distinguish between public and private parking areas with signage.
- Landscaping — shade trees, shrubs.
- Access to boat launch area.



Marina Facilities

- Provide at least one pump-out at every marina, located away from pedestrians and boat slips, if possible.
- Marina office/shop.
- Restaurant/food concession.
- Public restroom facilities.
- Public and private piers.
- A percentage of boat slips must be for public use.

URBAN - MIXED USE



WATERFRONT PROMENADE

- SHADE TREES, SHRUBS
- SEATING STEPS
- BENCHES, LIGHTING, LITTER CONTROL
- CONNECTION WITH ADJCENT PROPERTIES

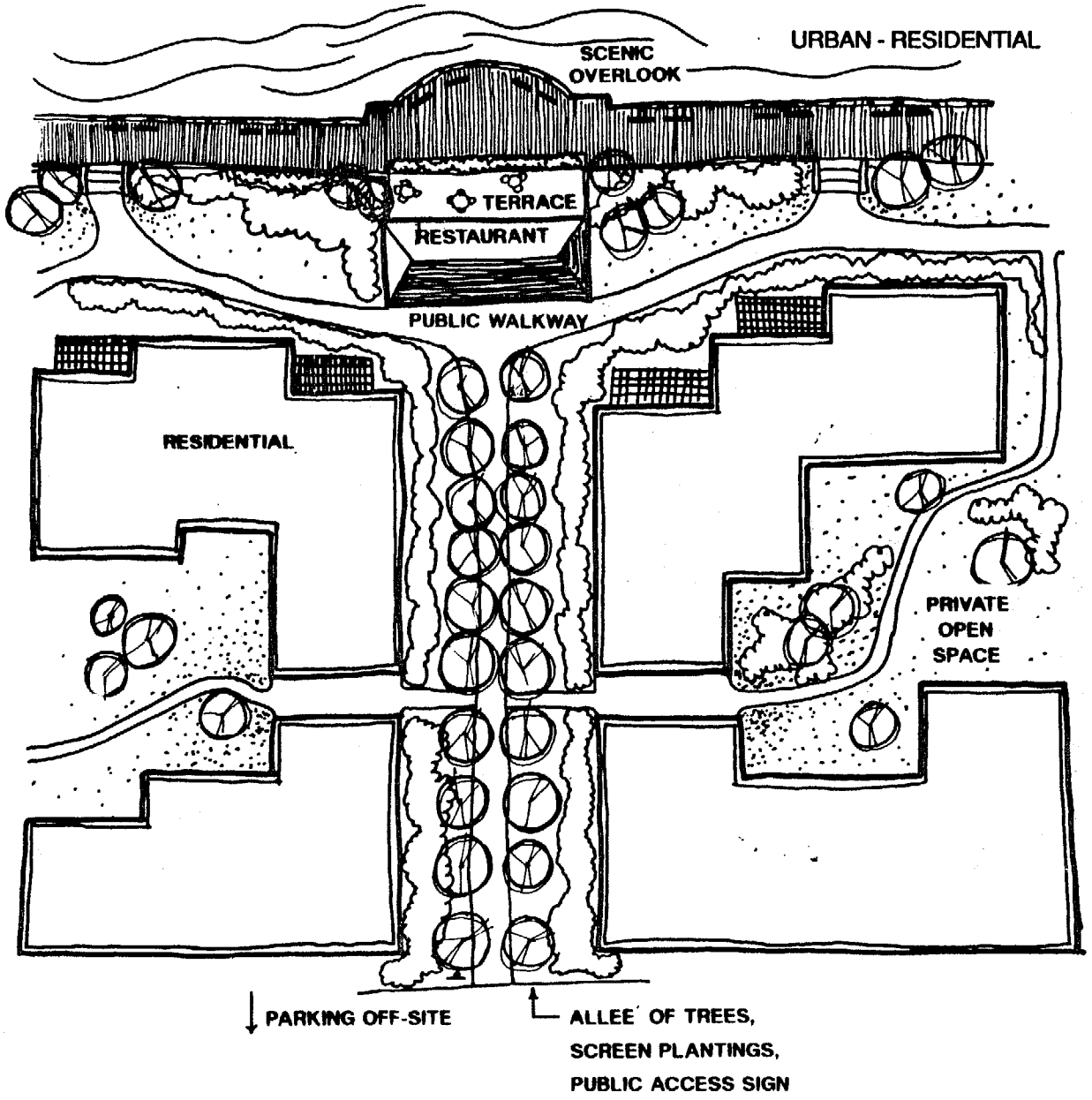
URBAN WATERFRONT — RESIDENTIAL OR MIXED USE DEVELOPMENT

Design Philosophy

A mixed use urban waterfront development combines land uses which are compatible, but not necessarily similar. Mixed use developments are able to provide many benefits through their diversity and their ability to combine public and private spaces. Elements of successful mixed uses may include commercial, residential, and recreation. A waterfront location may enhance the attraction of this type of development.

Making waterfront public access an integral part of an urban mixed use development helps to ensure its success. A waterfront promenade and park will afford residents, shoppers, workers and neighbors from the surrounding community an opportunity to enjoy the water-oriented activities. A promenade which is wide enough to accommodate strolling, spectating, lunching and jogging will draw people of all ages to the water's edge. Excitement is generated by taking advantage of the propensity of people to move through spaces. Where land is available, a park adjacent to the promenade should be planned to expand on the recreational possibilities.

If designed thoughtfully and with a balance of public and private space, the community of residents, shopkeepers, and patrons may coexist harmoniously. The opportunity for interaction among people within these spaces creates a stronger sense of community, while the existence of a neighborhood presence along the waterfront creates a positive perception of security.



An urban waterfront development which is primarily residential in nature should focus on the separation of public and private spaces. Potential conflict can be avoided if there is a clear delineation of space along the perpendicular and linear accessways.

The buildings should incorporate private interior open spaces and courtyards into their architectural design. Entryways into private spaces should be constricted and inhibit strangers from entering.

The perpendicular access should be direct with clear sight lines to the waterfront or other focal point. If a restaurant or other public feature is located along the waterfront, it should be within sight of passersby.

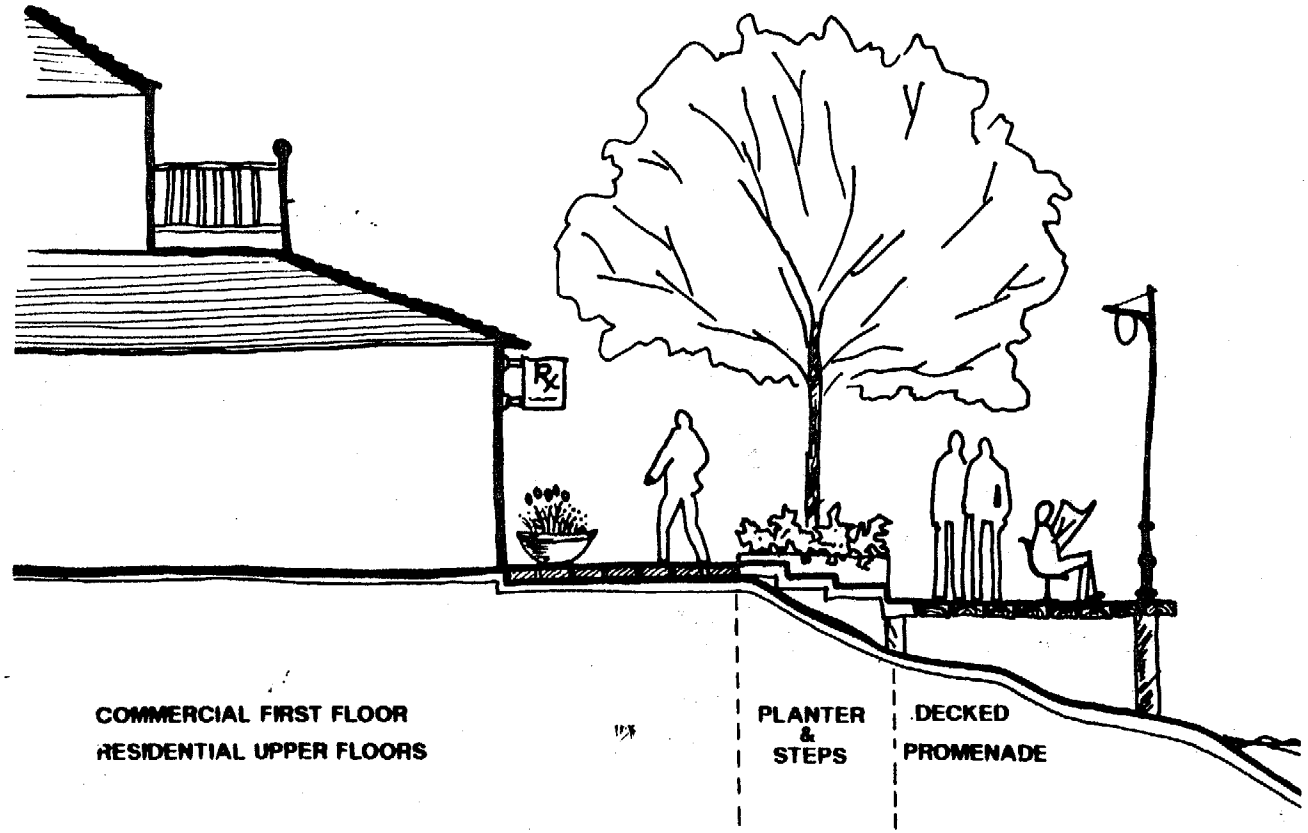
A scenic overlook should be incorporated into the public promenade. An axial relationship may be established with the perpendicular walkway to draw people to the waterfront.

Design Elements

A typical mixed use development located along an urban waterfront would include certain elements as described below. In instances where the mixed use development encompasses an existing pier, the promenade element should be continued along the perimeter of the pier.

The Promenade

- Continuous along water's edge
- Connection to adjacent waterfront developments
- Elevation change for spatial separation (public/private)
- Ample seating (benches, steps, walls)
- Decorative lighting (bollards, pedestrian level)
- Barrier railing—minimum of 42" height
- Scenic overlooks
- Provide life preservers
- Decorative pavement—texture and color to complement architecture
- Landscaping—shade trees, shrubs, annual flowers
- Site elements should be consistent with mixed use development



Waterfront Park

- Connection with promenade
- Location on pier or along water's edge
- Site elements should be consistent with promenade
- Seating and other site furnishings
- May be a private or municipal development

Retail, Residential, Restaurant

- Separation of public and private spaces with grade changes, buffers, plantings
- Avoid unnecessary "NO" signs
- Retail space should occupy first floor of buildings; accessible to patrons
- Restaurant should be water-oriented with outdoor dining space
- Housing units located in upper stories for mixed use development
- Visually reduce architectural mass by stepping back successive floors
- Provide private outdoor residential areas on terraces and rooftop gardens

Parking

- Locate at rear of development away from the water
- Minimize surface parking
- Locate spaces beneath buildings
- Valet parking for restaurant to minimize vehicles on pier or along water's edge
- Screen parking areas
- Landscape parking areas-shade trees, shrubs, groundcover

Signage

- Located at entrance to development and at perpendicular accessways
- Located along promenade and park
- Utilize public access logo

URBAN WATERFRONTS — INDUSTRY

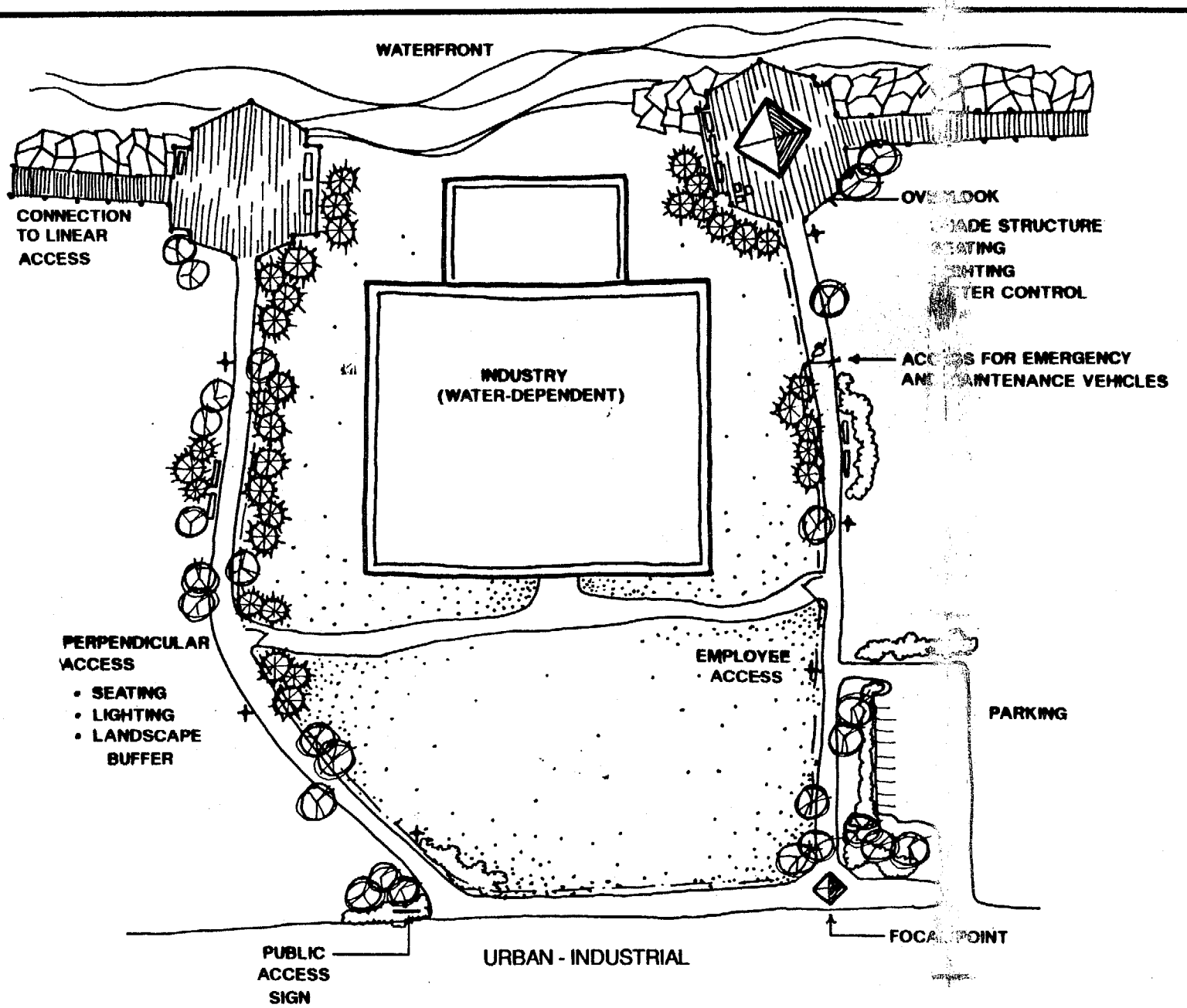
Design Philosophy

Historically, waterfronts often were devoted to water-dependent industries and existed primarily as ports. Waterfront property was valued largely for its utilitarian contributions. Only in the past several decades has society recognized the value of the waterfront as a public recreational resource. As transportation has become more land-based, the importance of water travel and associated ports has diminished.

Today, industrial uses on the waterfront present a difficult situation for waterfront public access. If the industry is water-dependent, often times public access is prohibited to ensure safety. Views of certain types of industry may be objectionable and necessitate screening. In other cases, such as with a ship-building operation, the level of activity and excitement may pique the public interest and visual access would be welcome, although from a safe distance.

As with any situation, each industry and site has unique characteristics and the design problems must be addressed individually. Ideally, both perpendicular and parallel access should be provided. With a water-dependent use, parallel access may end where public intrusion would conflict with the industrial operation. At that point, a pedestrian node should be created providing benches, a shade structure, an overlook to provide views of the water and industry (if appropriate) and other site amenities. Such a space would act as a terminus for both the perpendicular walkway and waterfront promenade. The perpendicular path should be well lit, inviting, and have signage to indicate public access. Employees of the adjacent industries should have access to the pathway and waterfront. Where possible, the waterfront promenade should be connected with adjacent properties for continuous waterfront access.

With an existing non-water dependent industrial use, a linear waterfront walkway should be provided. Screening with evergreens may be necessary to eliminate unpleasant views of the industry and provide a visual separation between the public and private use.


WATERFRONT
CONNECTION TO LINEAR ACCESS
INDUSTRY (WATER-DEPENDENT)
PERPENDICULAR ACCESS
• SEATING
• LIGHTING
• LANDSCAPE BUFFER
EMPLOYEE ACCESS
PARKING
PUBLIC ACCESS SIGN
URBAN - INDUSTRIAL

Future industrial uses should be restricted to existing urban and/or industrial areas. A marine resource industry, such as commercial fishing, would have priority, and would be encouraged to locate adjacent to existing port-related areas. New facilities would be encouraged to maximize open space and provide visual and physical access to the waterfront, provided it does not endanger the public.

Design Elements

A variety of design elements should be employed for an urban industrial use. When industry interrupts the linear flow along the water's edge, it is important to provide a visual connection between the promenade and access point. An easily recognizable element (architectural or natural) can help draw people to the waterfront.

Perpendicular Access

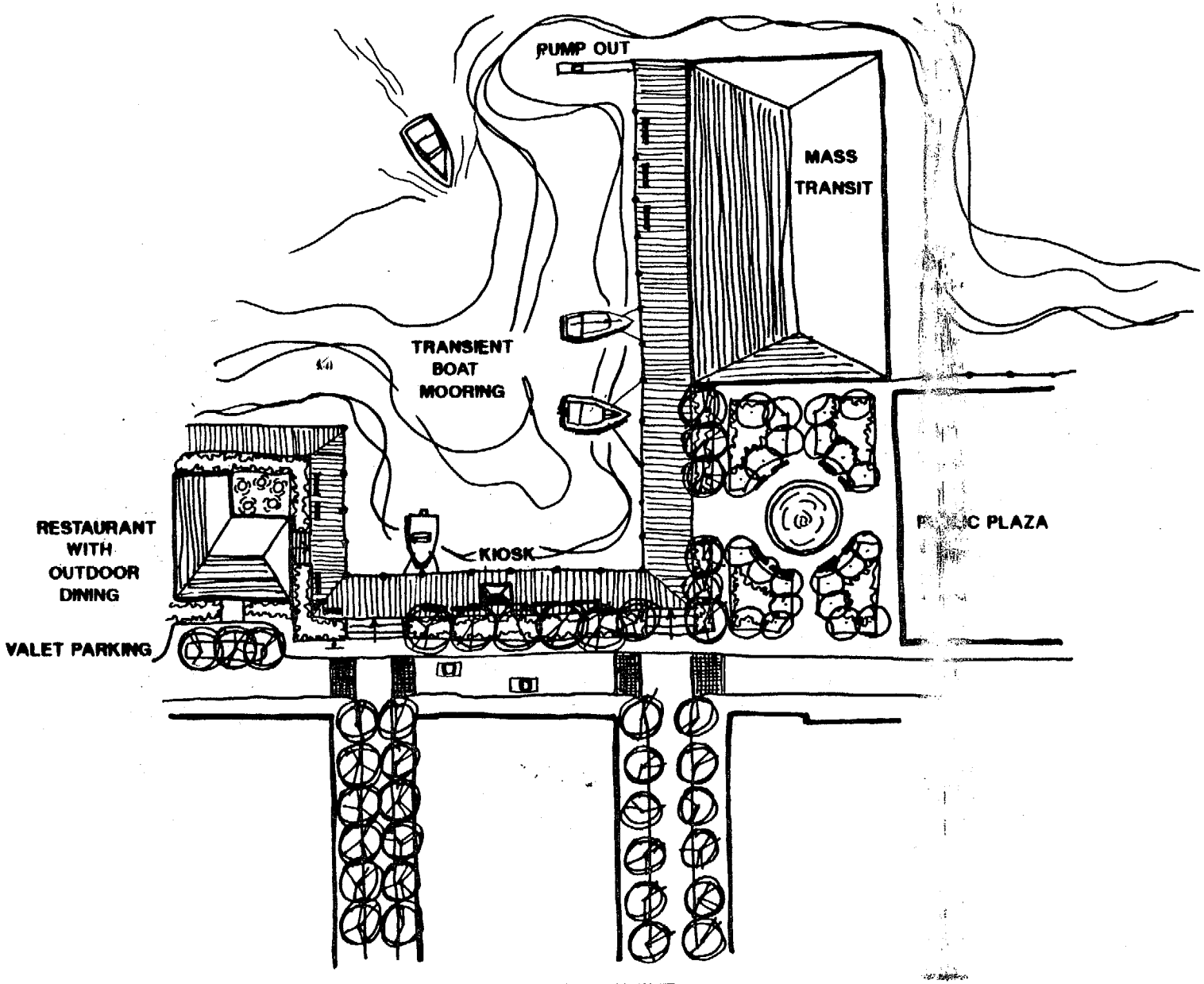
- Entrance should be inviting, landscaped and have prominent signage
- Parking should be located adjacent to access points.
- Parking may be shared with industry
- Parking should be screened from pedestrians
- Screen objectionable views of industry, highlight interesting vistas or industrial components
- Pathway should have a pleasant, curving layout
- Site amenities (lighting, benches, trash receptacles) should be provided at regular intervals
- Employee access should be provided.
- Provide an attractive fence around industrial site for security and public safety
- Landscape with evergreens, shade trees and flowering trees and shrubs

Pedestrian Node

- Terminus of perpendicular and linear access
- Provide shade structure
- Trash receptacles
- Benches
- Leaning rail for fishing
- Lighting
- Overlook
- Screen objectionable views of industry

Linear Access

- Continuous walkway along waterfront
- Connect perpendicular access points (along roadway)
- Site amenities (lighting, trash receptacles, benches)
- Signage indicating public access
- Separation between public and private areas with evergreen screen and grade change
- Security fence should be attractive (or well screened) and provide penetration points



URBAN - WATER DEPENDENT

URBAN WATERFRONT — WATER DEPENDENT/WATER-ORIENTED USE

Design Philosophy

A water dependent use within an urban setting could be a full service marina, a public transportation terminal, ferry rides for recreation, and a range of industrial activities which depend upon the water for transport or power. This section deals with the non-industrial water uses.

Water-oriented uses may include a waterfront restaurant that provides outdoor dining, a public park or walkway system. Public access, in the form of a linear waterfront promenade, provides the link between various water-dependent or water-oriented uses and allows the greater public an opportunity to take part in the experience.

In a dense urban environment, space is valuable and must be used wisely. Often the existing road network, infrastructure and buildings restrict access at the water's edge. Every effort should be made to provide a continuous linear walkway along the urban waterfront. A decked promenade may extend over the water in areas where space is tight. Public access may take form in a waterfront plaza or park where there are more spacious surrounds.

In any situation, provision should be made for pedestrian comfort and convenience. Site amenities should include lighting, seating, litter control and landscaping with consideration for handicapped and elderly individuals. The scale of the walkway and frequency of benches and trash bins should reflect the expected traffic flow of an urban environment. Vehicular traffic and parking should be directed away from the waterfront where possible. Access points should be located safely at pedestrian crosswalks.

Design Elements

Promenade

- Minimum width of 16 feet in an urban environment
- Ample seating should be provided in the form of benches, seatwalls and steps
- Continuous along water's edge
- Link various water-dependent and water-oriented uses
- Elevation changes for separation of public and private spaces
- Buffer from vehicular traffic (grade changes, landscaping)
- Decorative lighting — pedestrian scale and bollards.
- Barriers and/or leaning rail minimum of 42 inches in height
- Landscape with shade trees, shrubs and flowers that withstand wind, salt and city environments
- Handicap accessible
- Kiosks — information and food concession

Waterfront Plaza

- Connection with promenade, public transportation and urban neighborhoods
- Ample seating
- Water features
- Site furnishing — lighting, trash receptacles, bicycle racks, benches.
- Landscaping — shade trees, flowering shrubs — to soften hardscape and provide protection from the elements.

Parking

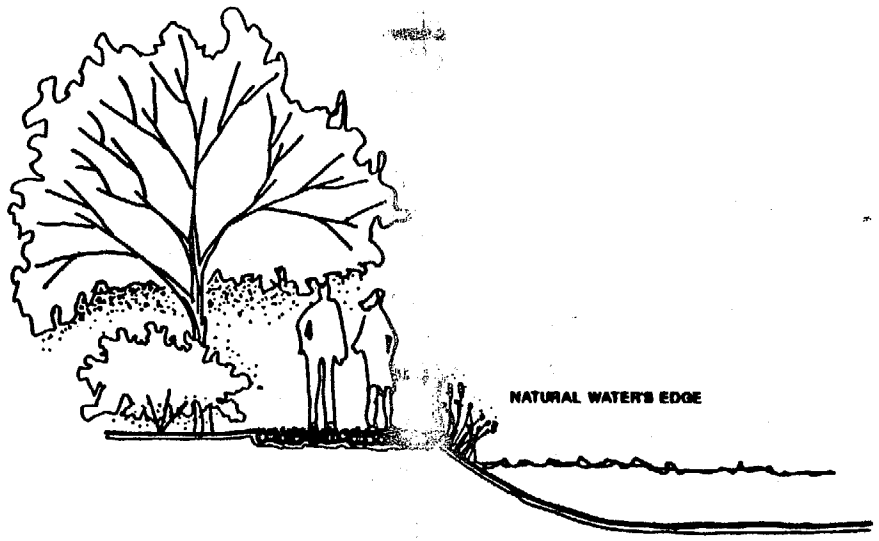
- Locate in parking garages away from waterfront
- Valet parking only for restaurants
- No off-street parking in front of waterfront promenade

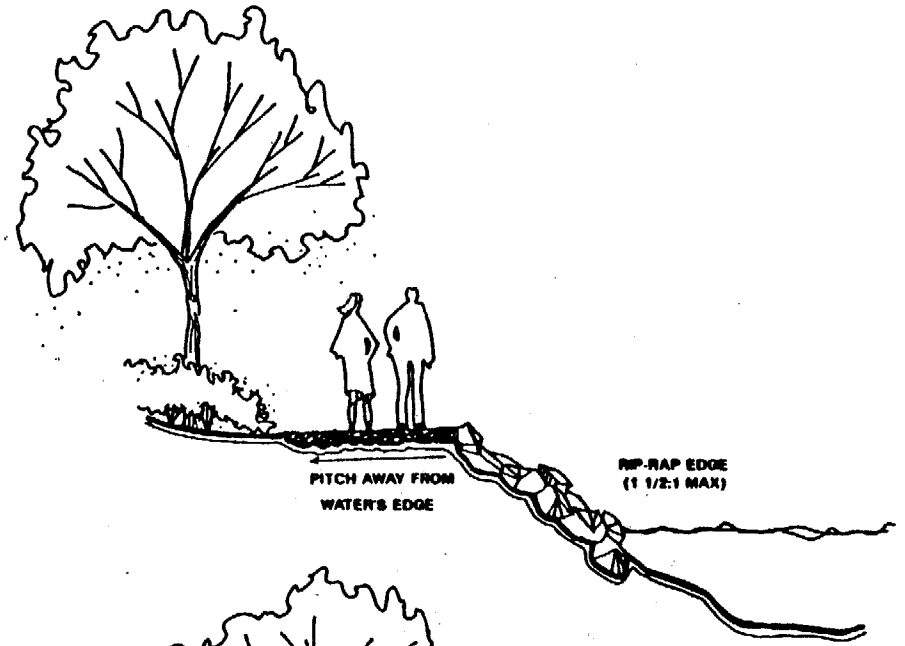
Signage

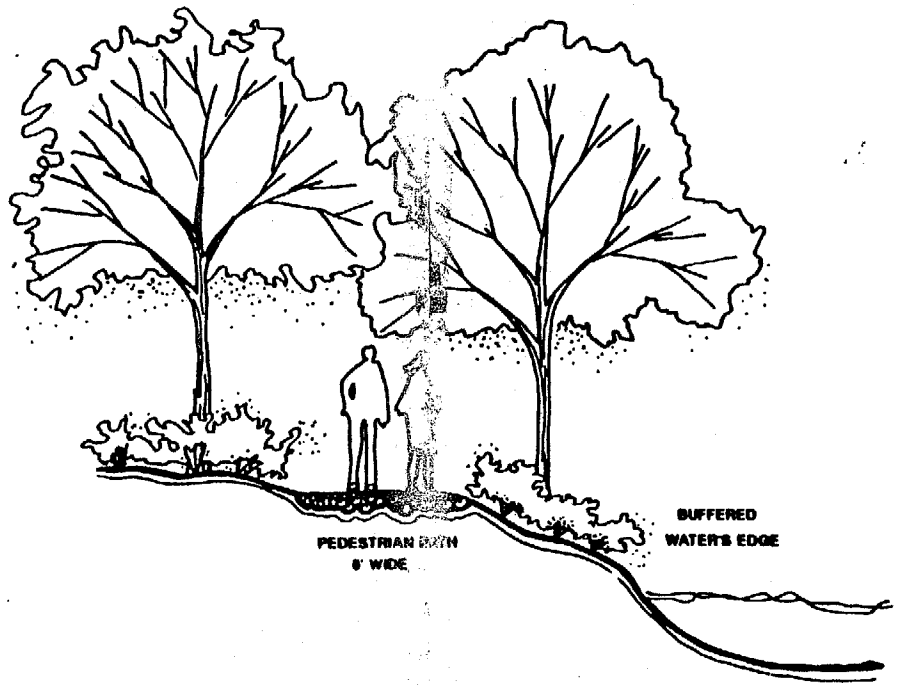
- Located at entrance to promenade
- Located along promenade and plaza
- Utilize public access logo
- Located throughout city to direct people to water's edge

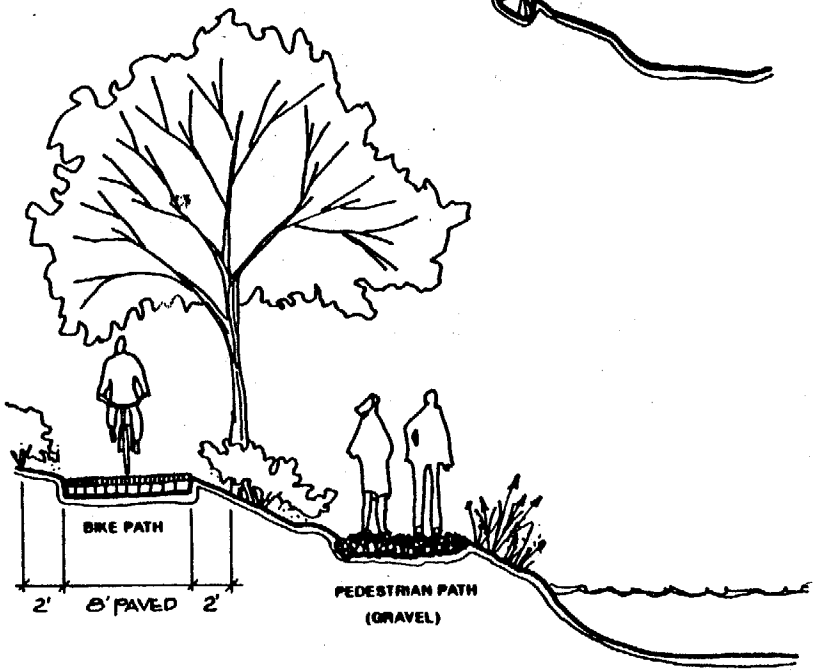
Docks

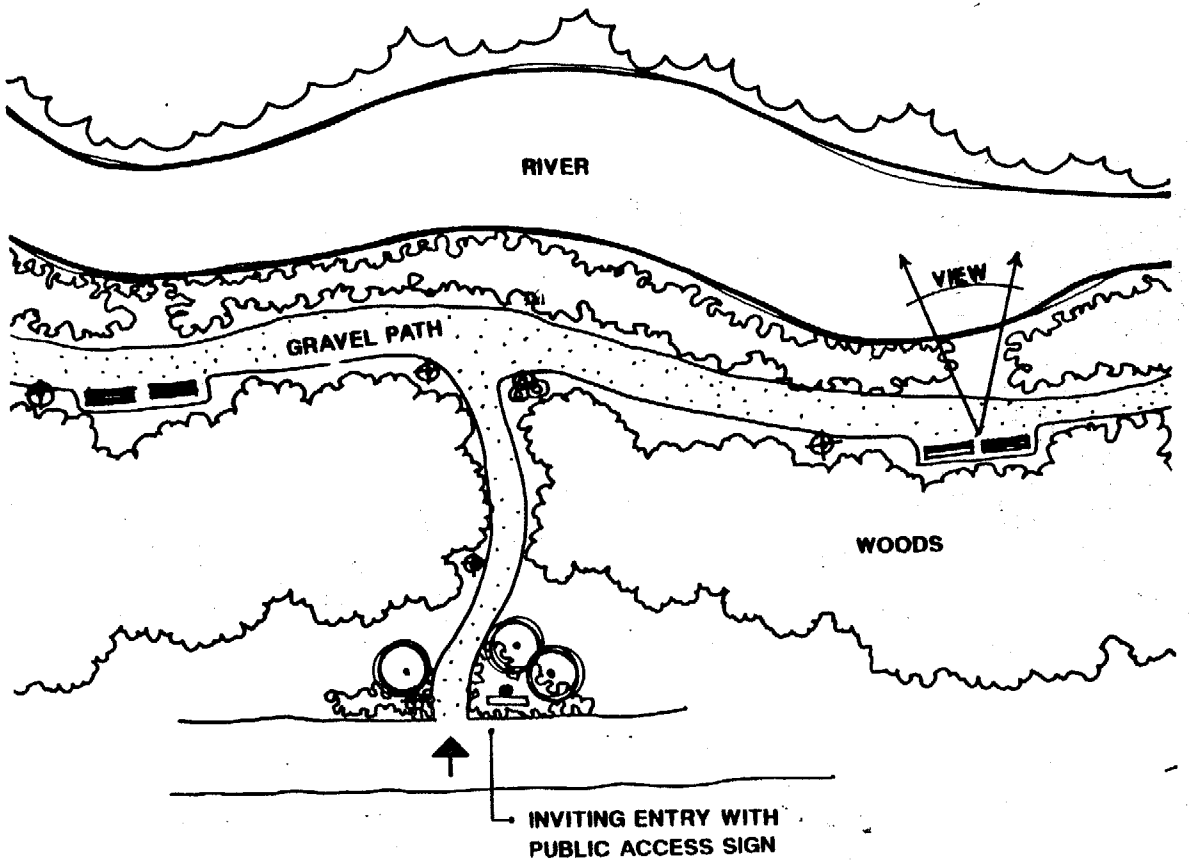
- Transient moorings along promenade
- Access to promenade for boaters
- Pump-out facilities


NATURAL WATER'S EDGE


PITCH AWAY FROM
WATER'S EDGE
RIP-RAP EDGE
(1 1/2:1 MAX)


PEDESTRIAN PATH
8' WIDE
BUFFERED
WATER'S EDGE


BIKE PATH
2'
8' PAVED
2'
PEDESTRIAN PATH
(GRAVEL)



NON - URBAN RIVER

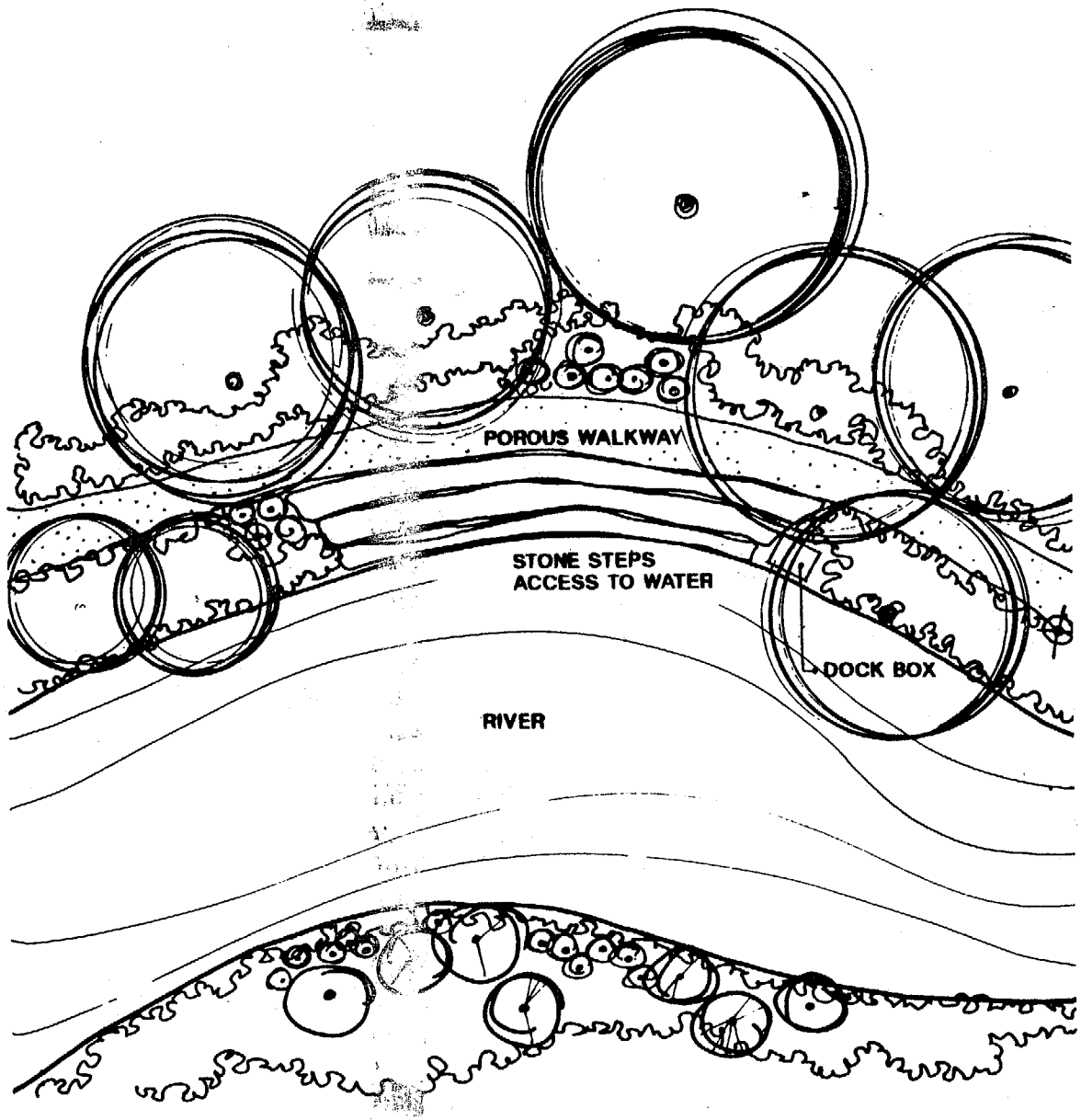
RIVER —
NON-URBAN WATERFRONT

Design Philosophy

The experience along a non-urban river is quite unlike that at the ocean, bay or urban waterfront. Often rivers are remote, surrounded by woodland and may be difficult to locate. Yet they provide a valuable resource to a public that seeks a more private, peaceful experience.

Rivers are frequently sought out by fishermen, hikers and nature enthusiasts. With only minor improvements, riverfronts may be made accessible to the broader community — some people who are reluctant to explore the rugged environment but are eager to enjoy the benefits.

With little effort and expense, a great resource can be made available to the public. Signage, posted at the outlet points, is a key element especially when rivers are out of view. A cleared pathway with minimal improvements, and some additional site amenities (trash receptacles and benches) are the basic elements.



NON - URBAN RIVER

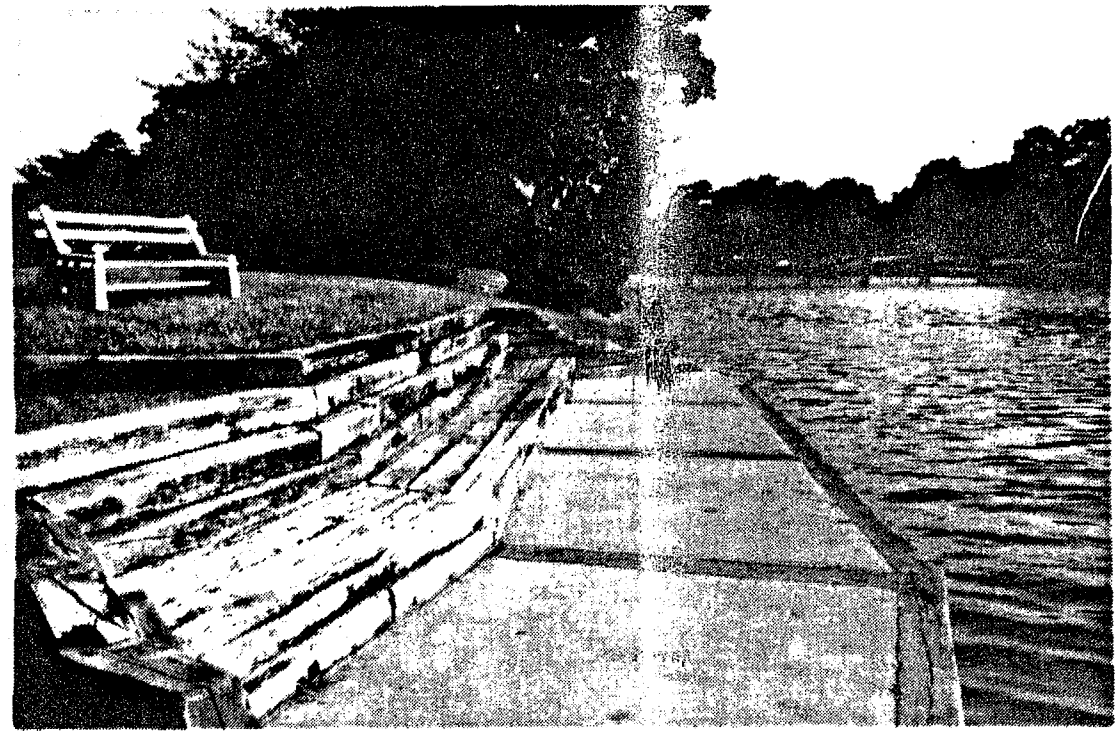
Lighting may or may not be necessary depending on proximity to nighttime population and expected use.

As with any site, the existing character of the place should be carefully considered before any improvements are made. The beauty of a non-urban river lies in its natural form and surroundings. Any improvements made should enhance that natural beauty and not compete with it. Site furnishing should be rustic; benches made of split logs, wooden trash bins; the pathway intimate in scale with a porous surface loose aggregate or compacted earth. Native plantings may be added to enhance views and provide focal points.

Design Elements

Pathway

- Permeable material — loose aggregate or compacted soil.
- Pitch runoff away from river's edge
- Minimum of 4 feet wide
- Additional space for seating areas and junction points
- Provide a continuous pedestrian circuit
- Provide more than one outlet point
- Walkway should follow river's edge and occasionally meander further into the woods to provide visual and spatial interest
- Paths should be located a few feet from river's edge so that the potential for erosion is minimized



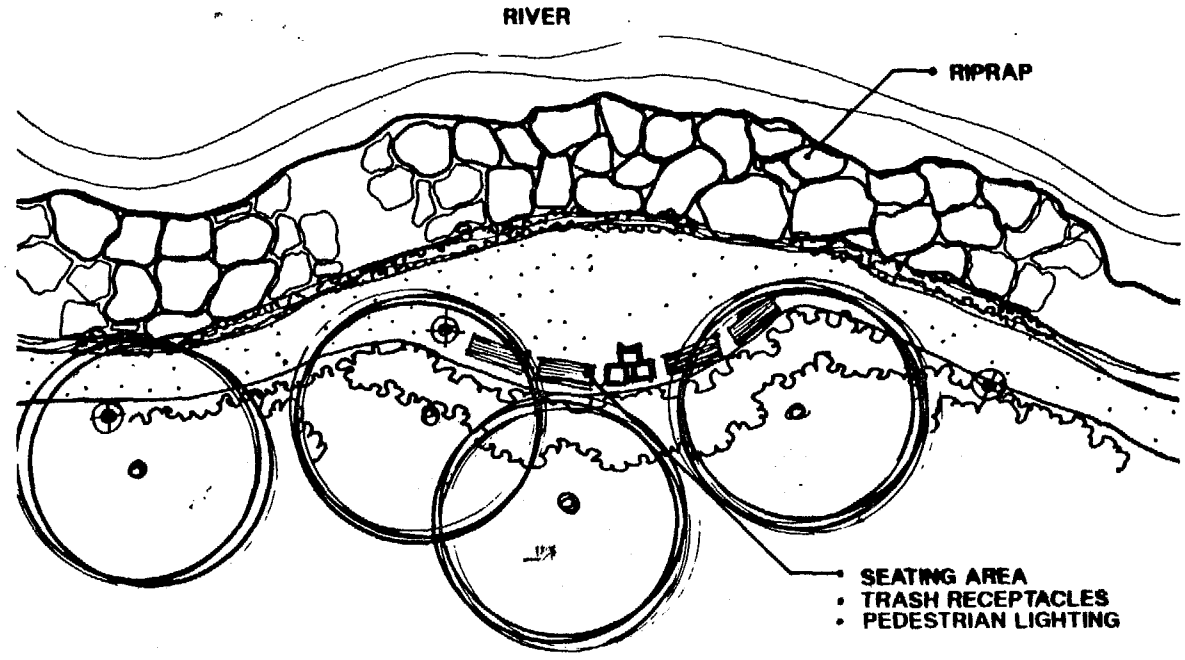
The opportunity to touch the water and actually get your feet wet is something most people desire, but are often denied.

Site Furnishing

- Furnishings should complement the natural environment
- Benches should be provided frequently along pathway and located to take advantage of views
- Furnishings should be clustered together and set back from pathway
- Litter control bins should be placed at frequent intervals
- Lighting, if necessary, should be pedestrian scale
- Signage should be posted at access entrance points

Pedestrian Nodes

- Occasional nodes should be created for visual and spatial interest
- Seating areas should be established at nodes
- Direct access to the water may be provided with steps. Steps should be made of a durable material such as stone
- Tie-up should be provided at steps to allow canoeists access to the land



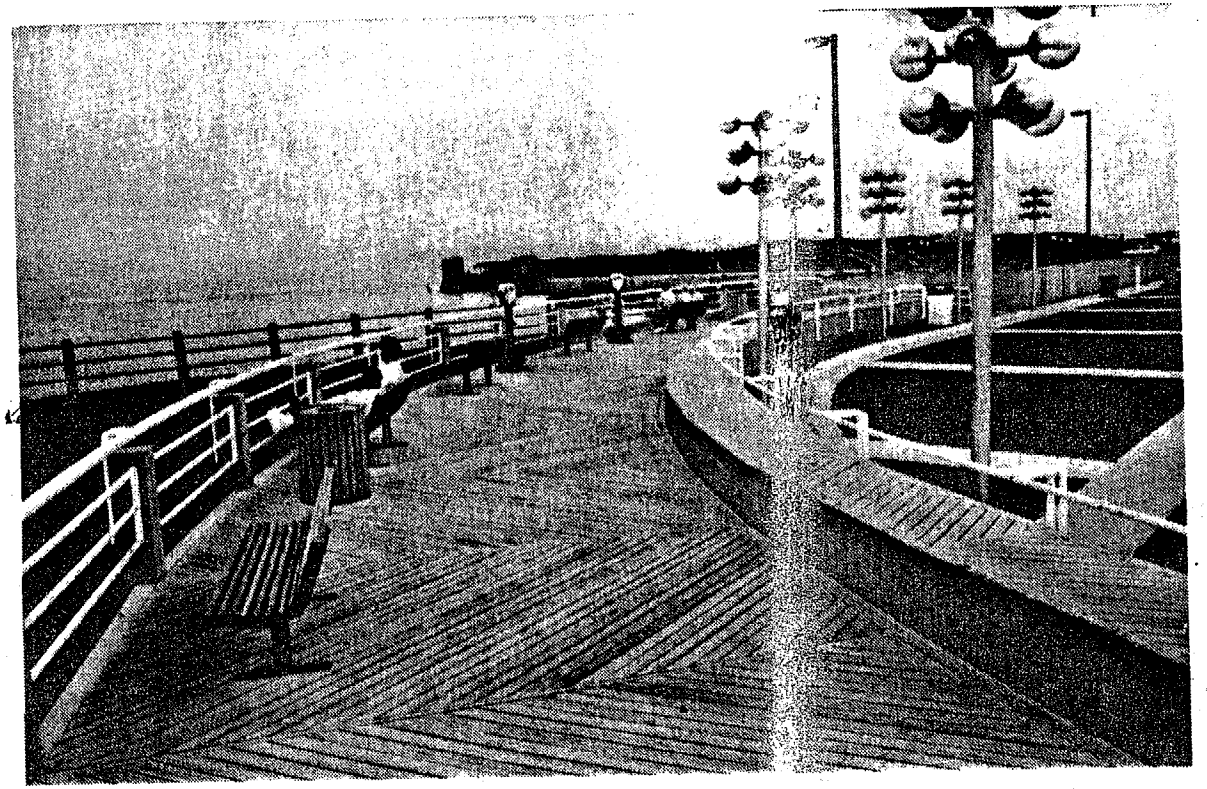
NON - URBAN RIVER

GENERAL DESIGN GUIDELINES

It is important for all areas of public access to provide basic site amenities, i.e., pedestrian lighting, seating, litter control, signage, restroom facilities, and parking.

Inclusion of these elements should be considered at the early planning stages so all the pieces fit together as a logical, cohesive whole. Site furniture should be chosen in response to the character of the existing site, and with an eye towards reinforcing the design intent. Regardless of the scale, whether it be a simple path to the beach or a major urban mixed-use development, the elements that are incorporated into the design should carry the same message. The material of construction and style of furnishing is often responsible for distinguishing a contemporary urban waterfront from a rustic riverwalk.

In every case, the site amenities should be compatible with other design elements. The various elements should be grouped together to avoid cluttering the site.



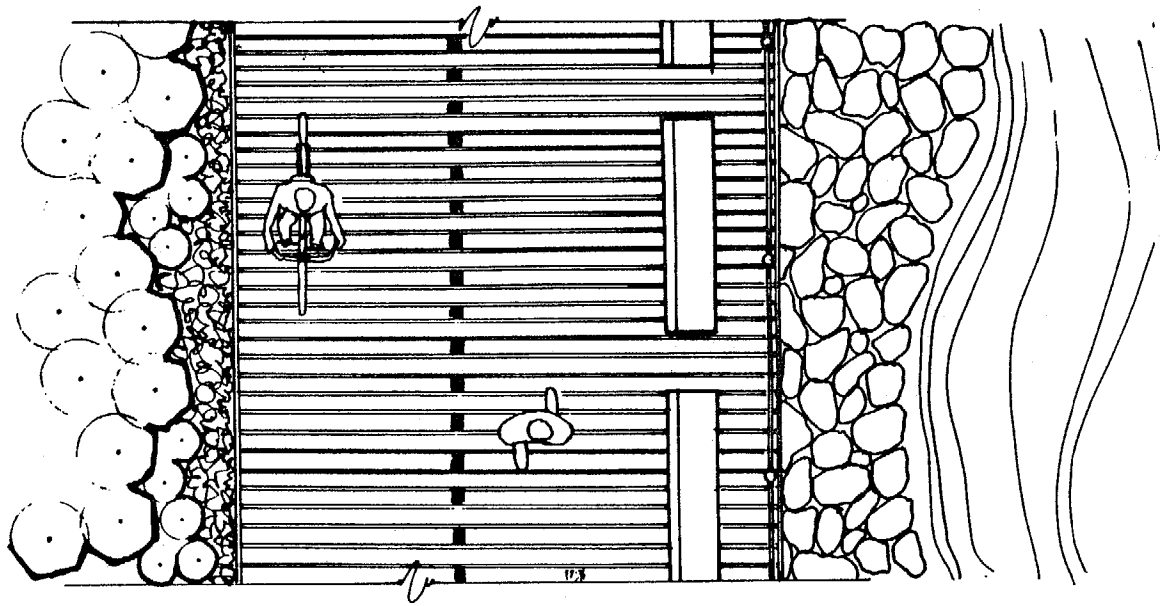
Promenades combine the key elements of parks in a linear ...ign — seating, lighting, litter control and activity points. Many urban promenades, in fact, ...re parks.

WALKWAYS

Pedestrian circulation is the most integral part of public access. Consequently, the design and layout of walkways and promenades is a critical element of public access. Designing a walkway should be more than a functional requirement. Thought should be given to the pedestrian experience and the various ways to improve it. Provision of site amenities, views, focal points and conveniences all add to the comfort level and ultimate enjoyment of the space.

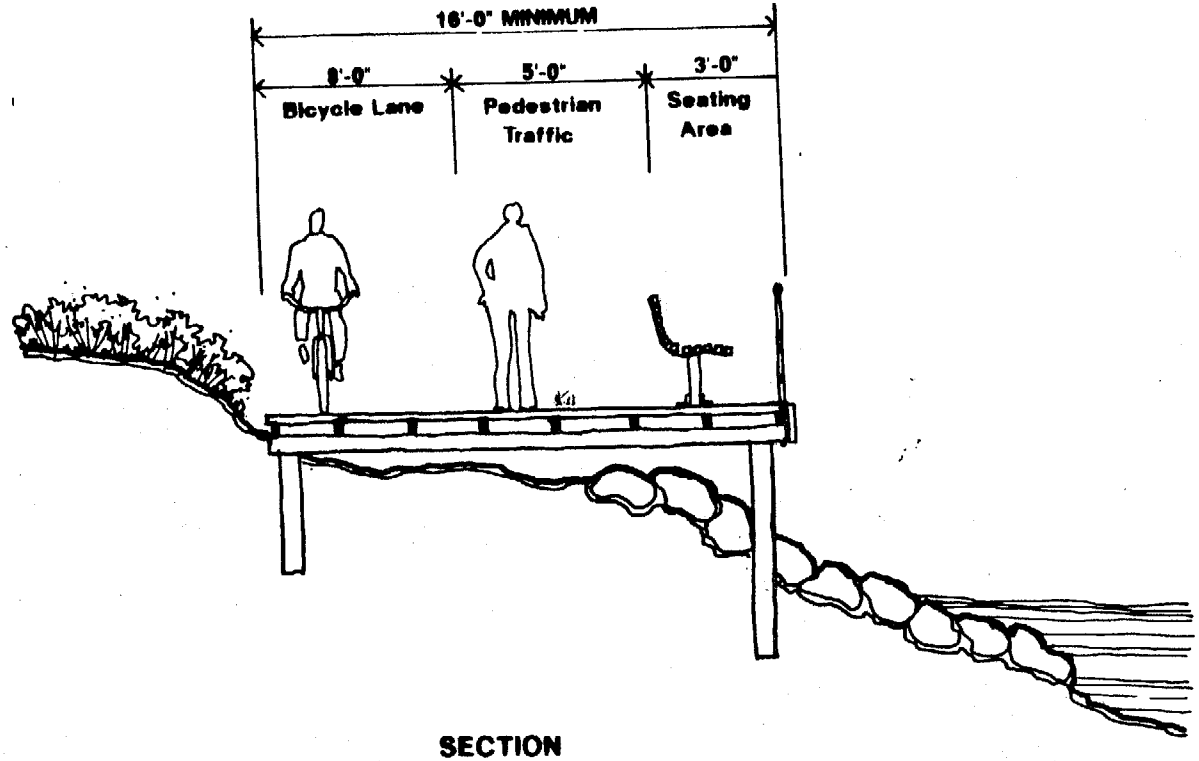
Design Guidelines

- Walkways should be a minimum of 6 feet wide.
- The cross slope should be 1% - 3% depending on the surface material.
- The longitudinal slope should not exceed 5%.
- The walkway should pitch away from the water for surface runoff.
- Loose aggregate should be used on secondary walkways; hard paved surface material should be used on major walkways.



PLAN

WALKWAYS & PROMENADES



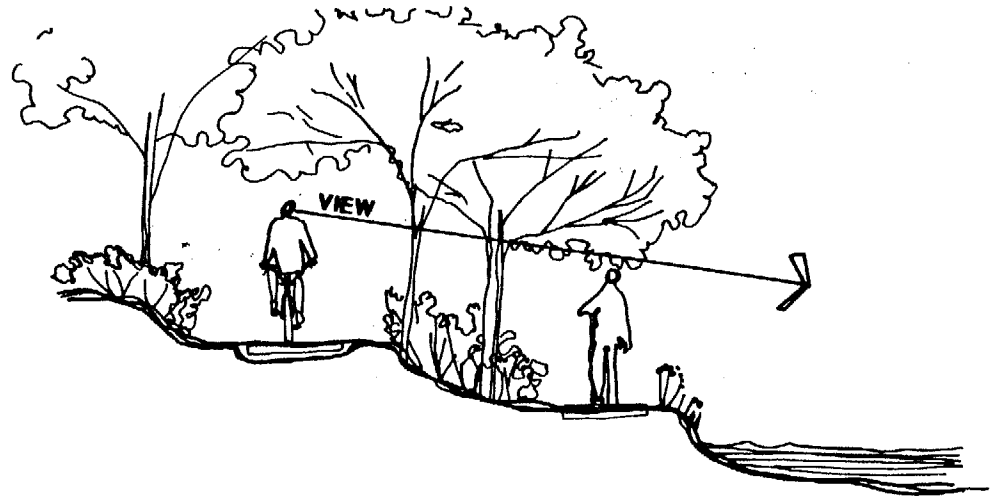
SECTION

- Ample seating should be provided along walkways.
- All walkways should be well lit.
- Trash receptacles should be provided along all walkways.
- Site furnishings, including plant material, should be located within a defined area so as not to obstruct the flow of pedestrian traffic.
- Seating areas should be located to take advantage of the views.
- Planting should be set back from walkways a minimum of 18 inches.
- Hazardous plant material (poisonous, thorny, odorous, etc.) should not be located near walkways.

BIKEWAYS

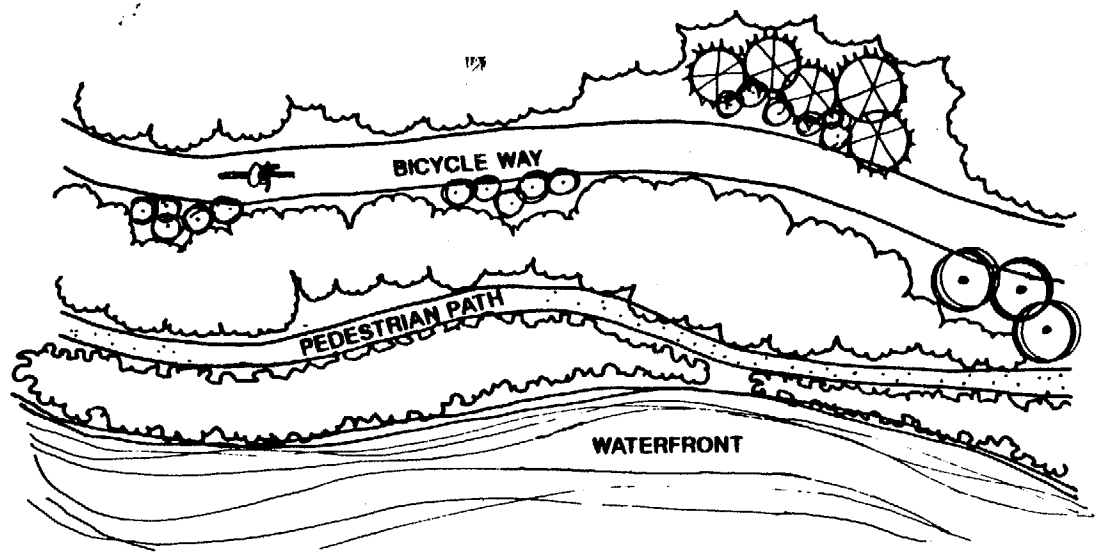
Bikeways — "Any road, path or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes."

*Source: American Association of State Highway and Transportation Officials



Design Guidelines

- Bikeways should be separated from other transportation modes, including pedestrians and joggers, whenever possible.
- Maintain views to waterfront for bicyclists and pedestrians.
- The layout of bikeways should take advantage of natural contours and features.
- Existing plant material should be selectively cleared. Mature healthy trees should be preserved.
- Supplemental planting should be placed at key locations to provide a color accent or focal

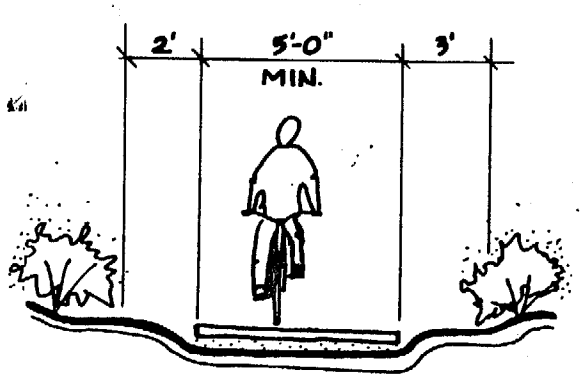


point, screen objectionable views, and create a more varied, pleasing visual experience overall.

- Periodic resting spots should be strategically located to take advantage of views.
- Signage along path and at the entrance to bikeways should indicate public access for bicycle riders only, where applicable.
- The bikeway surface should be paved with a material which is traversable even in wet conditions. Suitable materials may include: asphaltic concrete, portland concrete or stabilized aggregate with sealant.
- Pathway should be pitched away from the water's edge. Drainage runoff should be contained in a grass lined swale, or stone gutter and directed towards a drywell.
- Gradient along bikeway should not exceed 5% for long inclines. In general:

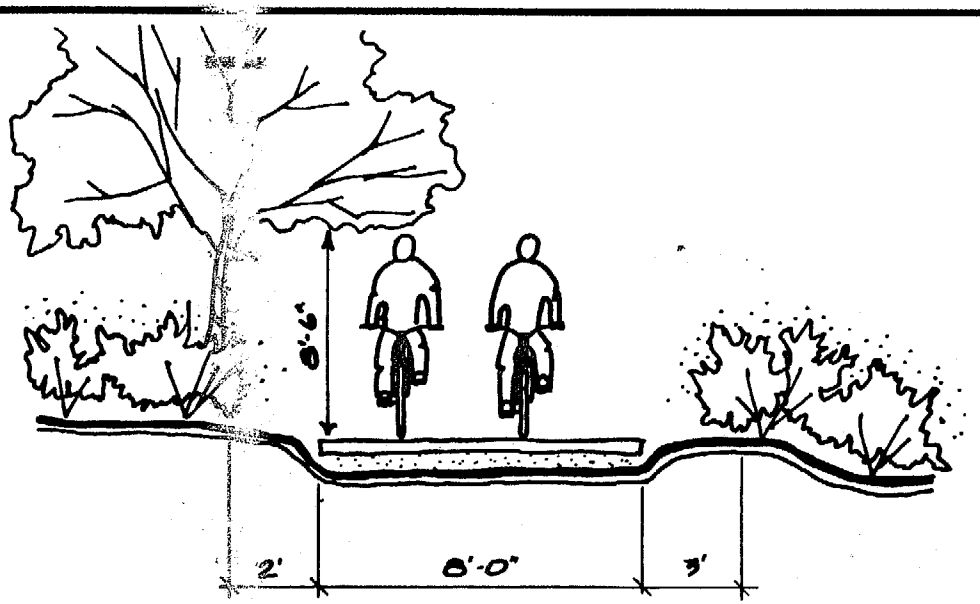
Easy	0 - 5%
Strenuous	5 - 10%
Difficult	10 - 20%

- The steeper the slope, the more resting places that will be required.



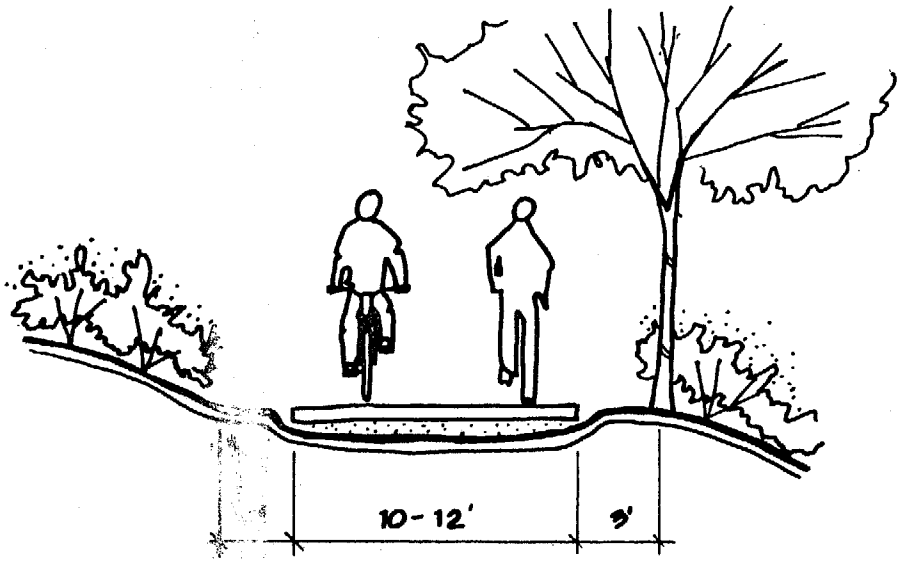
ONE WAY TRAFFIC

- 5' wide paved path
- 2' graded surface either side of paved path
- 3' clearance typical for plant material, guardrails or other vertical elements
- 8' - 6" vertical clearance for tree branching



TWO WAY TRAFFIC

- 8' wide minimum paved path
- 8'-6" vertical clearance
- 2' graded area adjacent to either side of paved path
- 3' minimum clearance for plant material



SHARED BIKE - PEDESTRIAN PATH

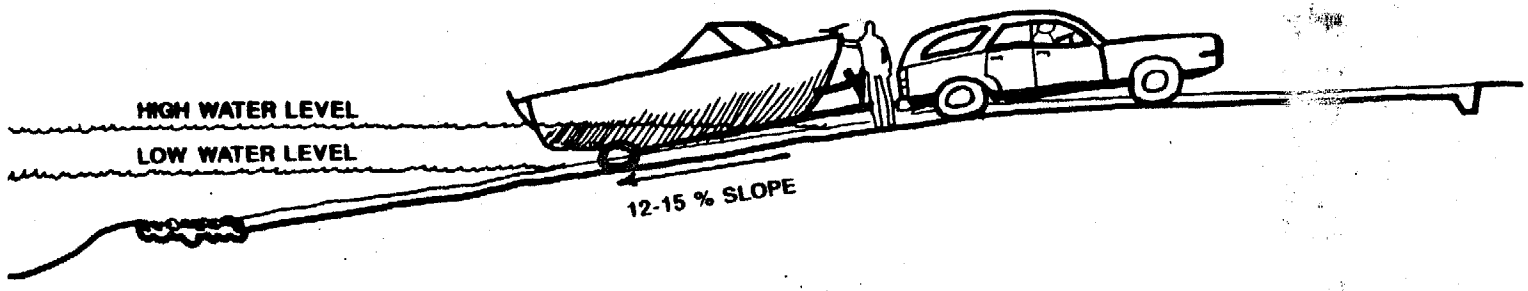
- 10 - 12' wide paved path
- 2' graded area unnecessary
- 3' clearance for plant material
- 8'-6" vertical clearance for tree branching

BOAT LAUNCH RAMPS

"Boat ramps are inclined planes, extending from the land into a water body for the purpose of launching a (small) boat into the water until the water depth is sufficient to allow the boat to float. Boat ramps are most frequently paved with asphalt or concrete, or covered with metal grates."

"Where boat ramps are conditionally acceptable, they must meet the following conditions: (a) there is a demonstrated need that cannot be met by existing facilities, and (b) they cause minimal practicable disturbance to intertidal shallows or subaqueous vegetation."

* Source: N.J.A.C. 7:7E-4.11 (b) Boat Ramps.



Design Guidelines

- Public boat ramps have priority over private and restricted use ramps.
- Boat ramps should be constructed of environmentally acceptable materials such as concrete or oyster shell.
- Launching ramps should be located in sheltered waters only.
- Clearly marked traffic circulation patterns should be established between parking area, launch ramps and boat washes.
- Launch lanes should be a minimum of 15 feet wide for a multiple-lane facility.
- Single lane ramps should be 18 feet wide.
- Ramp surface should be scored perpendicular to traffic direction for additional traction.
- Ramp gradient should be 12% - 15%.
- The ramp should extend a minimum of 4 feet below the low water level.
- Maneuvering area should be a minimum of 80 feet in diameter.
- Provide a maximum of 4 lanes per ramp.
- Provide a minimum of 50 pull-through parking spaces of 30'x10' per ramp lane.
- Holding slips or dock space should be provided adjacent to launching ramp for boats waiting to load on ramp; minimum of 1 slip/ramp lane.
- A boatwash to clean salt and dirty water from boats should be provided near launch ramp whenever possible; one lane, 30'x15', to accommodate car and trailer per ramp lane. Pipe in fresh water from local supply main and provide flexible hose of ample length to move around boat and trailer. Drainage shall be handled at point of source and not permitted to runoff down ramps or to pond.
- Trash receptacles should be placed near every boat ramp.

*Source: Timesaver Standards for Site Planning, DeChiara and Koppelman, 1984, and Time Saver Standards for Landscape Architecture, Harris and Dines, 1988.

BOAT DOCKS AND PIERS

Recreational boat docks and piers are structures supported on pilings or floating on the water surface, which are used specifically for recreational fishing and boating.

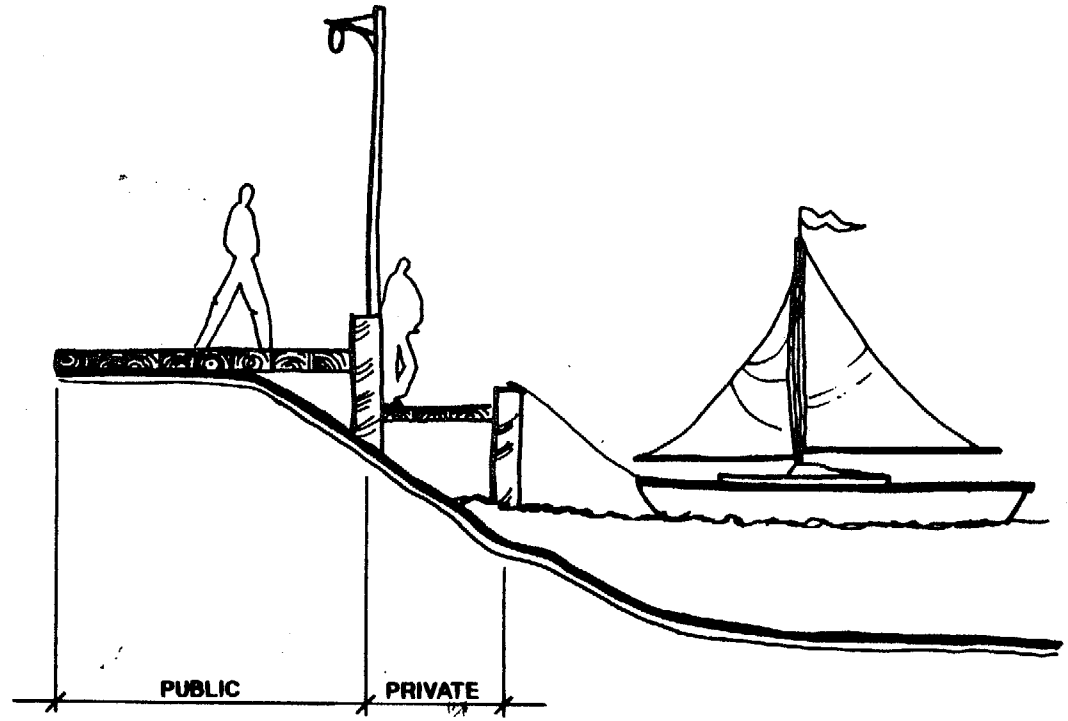
Design Guidelines

The interface of public and private space can be managed effectively through thoughtful design.

- Subtle changes in grade, or the width, of docks and piers may distinguish public from private spaces.
- Docks and piers cantilevered, floating, or built on pilings are preferred to those constructed on fill.
- Pressure treated wood is the preferred material for the construction of docks and piers.
- Minimize adverse environmental impact to the maximum extent feasible.
- Do not hinder navigation or conflict with overhead transmission lines.
- Minimize interruption of natural water flow patterns.
- The width of docks and piers and the spacing of planks affects the amount of sunlight penetration into the water and onto the bottom. Minimizing the width and maximizing the spacing promotes plant growth under the structure, and helps protect loosening of boards during high water levels and wave slap from underneath.
- Docks and piers built on pilings will undergo ice heaving, frequently leading to structural damage, during thick ice conditions in areas with significant tidal action. Normal length pilings need to be resunk annually due to ice raising unless some type of water circulation system is installed or ice is broken up daily."*
- Cantilevered docks at a height above winter ice and tidal action levels must be fastened to a bulkhead.*
- Dock width should not exceed 8 feet except under unusual circumstances.*

- "Dock height above water is determined by average deck levels and probable water level. Maintain a 12 inch minimum between water and bottom of deck."*
- "Cross bracing should be minimized to avoid entanglement of swimmers."*
- "Wood marine construction must be pressure treated with a preservative. Waterborne preservatives are recommended for decks because creosote stains shoes and bare feet. The preservatives must be approved by the Environmental Protection Agency."*
- Floating docks should be constructed in sections which can be easily lifted out of the water. The surface should be made of wood planking or aluminum slats attached to a buoyant base.

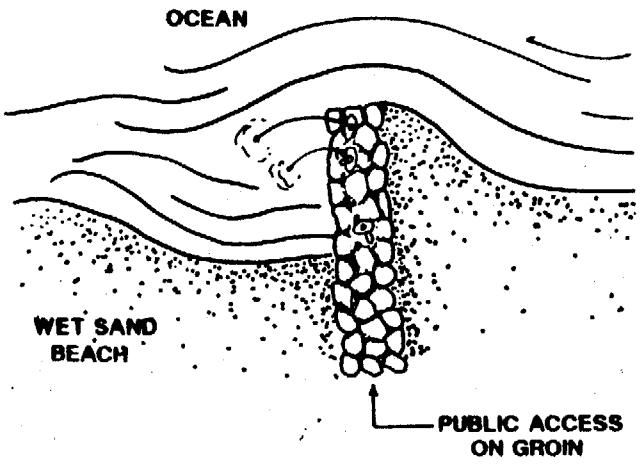
* Source: Architectural Graphic Standards, Ramsey/Sleeper, 8th Edition.



SHORE PROTECTION STRUCTURES

Shore protection structures often provide a hard edge to the waterfront or wet sand beach allowing recreation access that may not have been possible on a natural shore. Fishing and crabbing can be enjoyed from shore protection structures such as jetties and seawalls. Bulkheads facilitate boat access and tie-ups. Most importantly any shore protection structure must allow pedestrian access along the top of the structure.

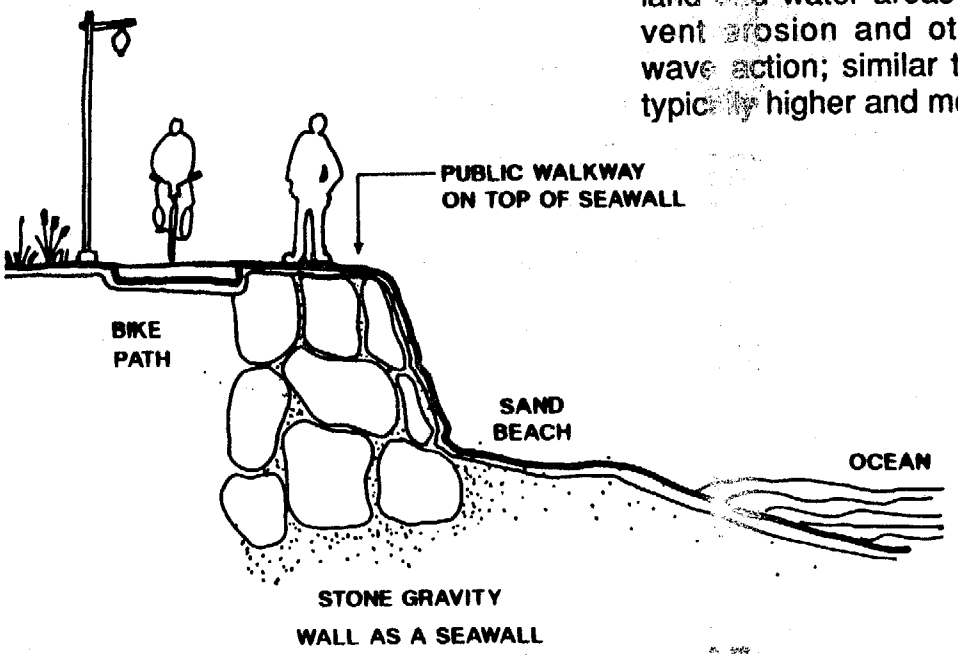
Groins, seawalls, bulkheads and revetments are four types of shore protection structures. Groins are shore protection structures built perpendicular to the shore to trap sediment and retard shore erosion.



Groins may be constructed of the following:

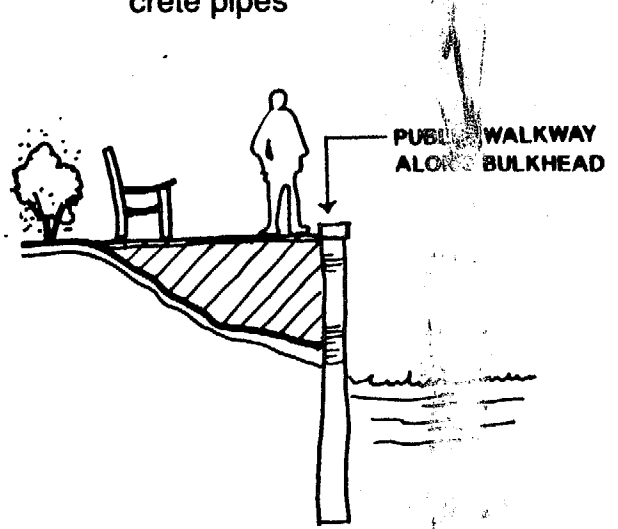
- Stacked sand or grout filled bags
- Stone gabions
- Quarry stone
- Longard tubes
- Sheet piling: timber, steel or aluminum
- Timber and rock: timber crib and stone fill

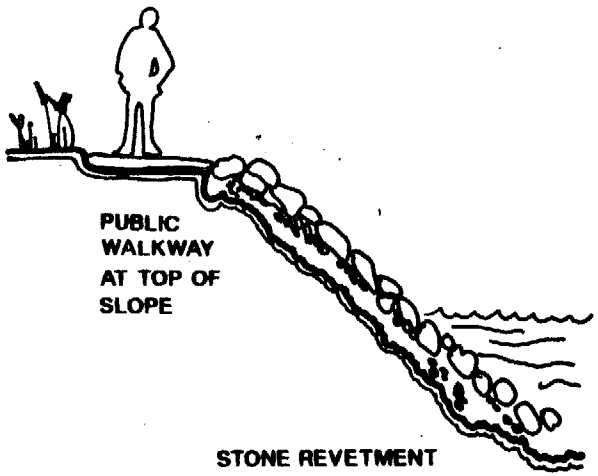
A seawall is a structure separating land and water areas primarily to prevent erosion and other damage by wave action; similar to bulkheads but typically higher and more massive.



A bulkhead is a structure that retains or prevents sliding of land or protects land from wave damage. Bulkheads may be constructed of the following:

- Sheet pile — treated timber, steel, aluminum
- Post supported — hog wire fencing and stacked bags, treated timber, untreated logs, used rubber tires, and wood posts and steel H-piles and railroad ties
- Longard tubes (woven polyethylene fabric tube filled with sand)
- Miscellaneous bulkheads — stacked used tires, used concrete pipes





STONE REVETMENT

A revetment is a facing of stone, concrete, or other durable material, built to protect a scarp embankment, or shore structure against erosion by waves or currents. They may be constructed of the following:

- Rubble (primary advantage is flexibility)
- Concrete block
- Stacked bags or mats
- Gabions

* Source: Low Cost Shore Protection, A Property Owners Guide, Army Corps of Engineers, 1981, Page 93.

Design Guidelines

- Linear access along top of shore protection structure
- Bikepath adjacent to seawall, revetment or bulkhead
- Perpendicular access from public road to shore protection structure
- Pedestrian lighting, benches, trash receptacles where appropriate
- Signage at entry point to access way
- Landscaping (shade trees and native seashore plantings) along shore protection structure

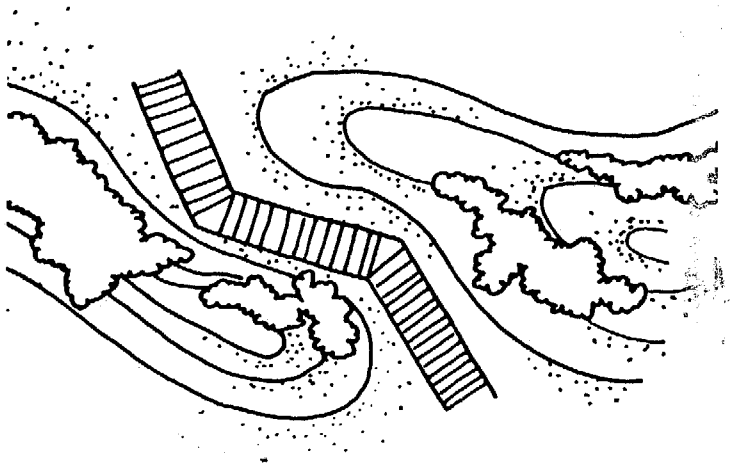
DUNE WALKOVERS

Dune walkovers fulfil the requirements of coastal policy for dunes. Walkovers provide... "designated access ways for pedestrian and authorized motor vehicles between public streets and the beach." They should cause... "minimum feasible interference with the beach and dune system and are oriented so as to provide the minimum feasible threat of breaching or overtopping as a result of storm surge or wave runup; ..." (N.J.A.C. 7:7-3.21(b)ii).

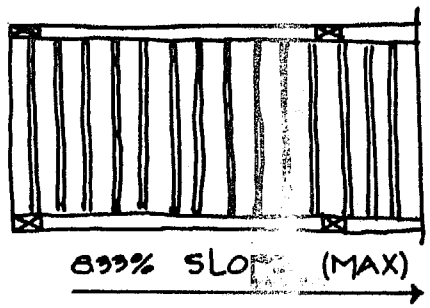
Dune walkovers provide essential public access to the wet sand beach, while acting to preserve and enhance the natural dune structure. They allow natural sand drift and vegetation to grow as well as providing maximum control of pedestrian traffic to the beach. Walkovers may also be constructed through other sensitive environments such as marshes and wetlands providing access for both education and recreation.

Design Guidelines

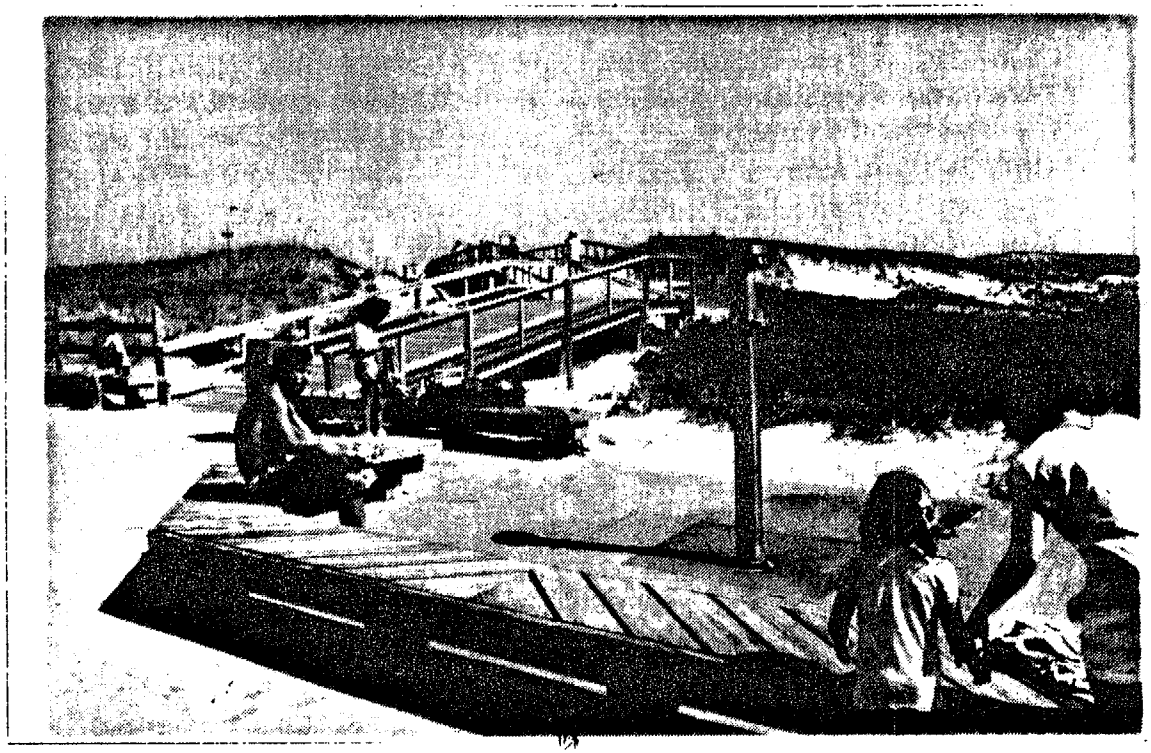
- Dune walkovers should be constructed to avoid vegetation and reduce disturbance. They should meander between drifts avoiding the crests of dunes traveling a maximum of half way up the contour of the slope. Walkovers may be protected to some extent from sand drift on the leeward side of dunes.



DUNE WALKOVERS

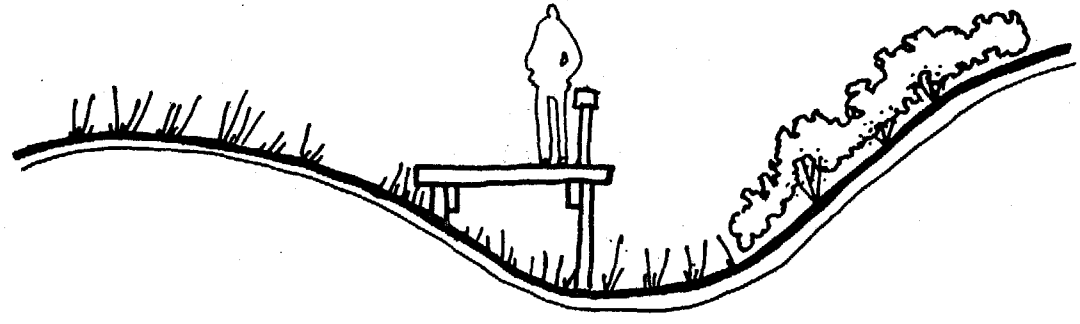


- Signage should be posted at both outlets to any public accessway.
- Outlets to dune walkovers are ideal locations for litter receptacles since they funnel visitors through a controlled area.
- The width should range between 6-8 feet to allow sunlight penetration beneath the deck for vegetation to grow. An average height above the ground should be 3-4 feet, although the actual height will vary due to sand drift and existing topography.
- All elevated walkways must have a 42 inch high railing.
- Public accessways must provide handicapped access. Ramps with a maximum slope of 8.33% (12:1) for a distance of 30 feet should be used in place of stairs.
- Planks should be laid perpendicular to the flow of traffic with 1/4-1/2 inch spacing between boards.



Dune walkovers provide essential public access to the wet sand beach while acting to preserve and enhance the natural dune structure.

- Provide landings or deck areas at the end of dune walkovers for handicapped visitors to enjoy the beach and shorefront.
- Construction materials should be pressure-treated or rot-resistant wood, free of cracks or splinters with an unfinished surface. Lay heartwood face down to prevent cupping and reduce splintering. Paint and stain should be avoided since they present a maintenance problem.
- All hardware on deck surface should be counter-sunk and made of hot-dipped galvanized steel.



HANDICAP ACCESS RAMPS

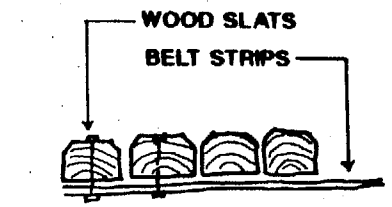
Over the past several decades, the rights of the handicapped to gain access to public areas and recreation facilities have gained increased attention and concern. Progress has been made in designing accessways for the physically handicapped and the aged. Virtually all new public facilities in New Jersey are now being designed to provide handicapped facilities. The New Jersey BOCA Code (N.J.A.C. 5:23-7) mandates barrier free access to all public buildings, building sites and portions thereof, and the New Jersey Division of Coastal Resources, in its permit review process, requires adherence to the BOCA code.

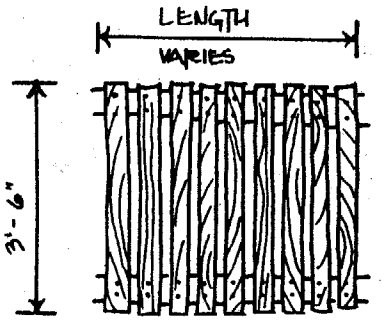
Coastal recreational facilities throughout the United States are being made barrier free accessible for the physically handicapped and the aged. In New Jersey, access to beaches is limited to a few public parks which provide access only to the dry sand areas of the beach. At Island Beach State Park, however, creative designs have been employed to help the handicapped to enjoy the water's edge.

New Jersey is looking to California-our coastal state to the west-for an innovative system of providing barrier free access. "Wheelchair accessible access has been provided within the Golden Gate National Recreation Area at Stinson Beach in Marin County over soft unconsolidated beach sands by installing a flexible, roll-out wooden boardwalk. The boardwalk can be easily removed and stored during the winter months, thus providing shoreline access without the high costs of repairing winter storm damage.

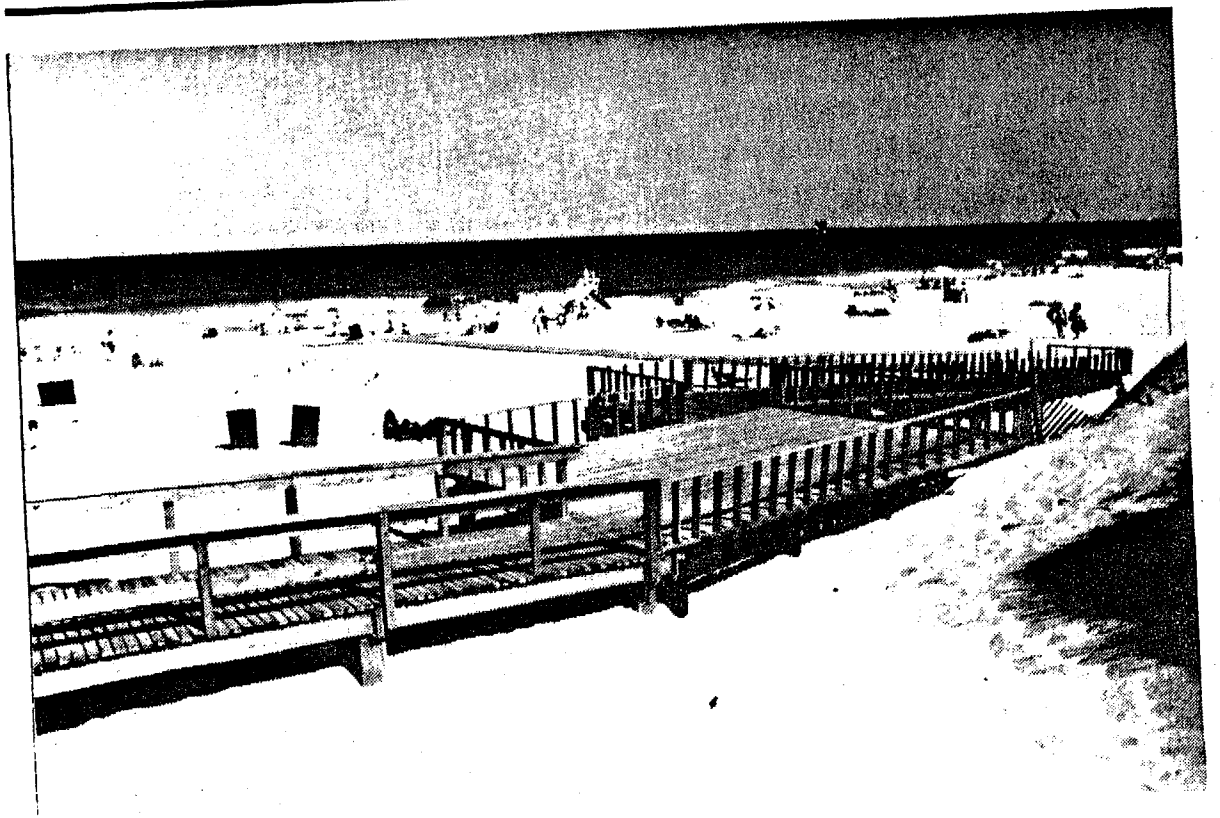
The boardwalk is constructed of 1" x 1" x 30" oak slats. The slats are attached near their ends to two long narrow rubber belts, similar to the rock quarry conveyor belts used at Ano Nuevo State Reserve. The length of the boardwalk is approximately 50 feet, and when rolled up is heavy enough that it requires at least two people to carry it. When laid out, the boardwalk is staked in place to prevent it from moving. Grading of the sand is usually unnecessary prior to installation."*

* Source: DESIGNING Accessways, CASE Report, page 69.

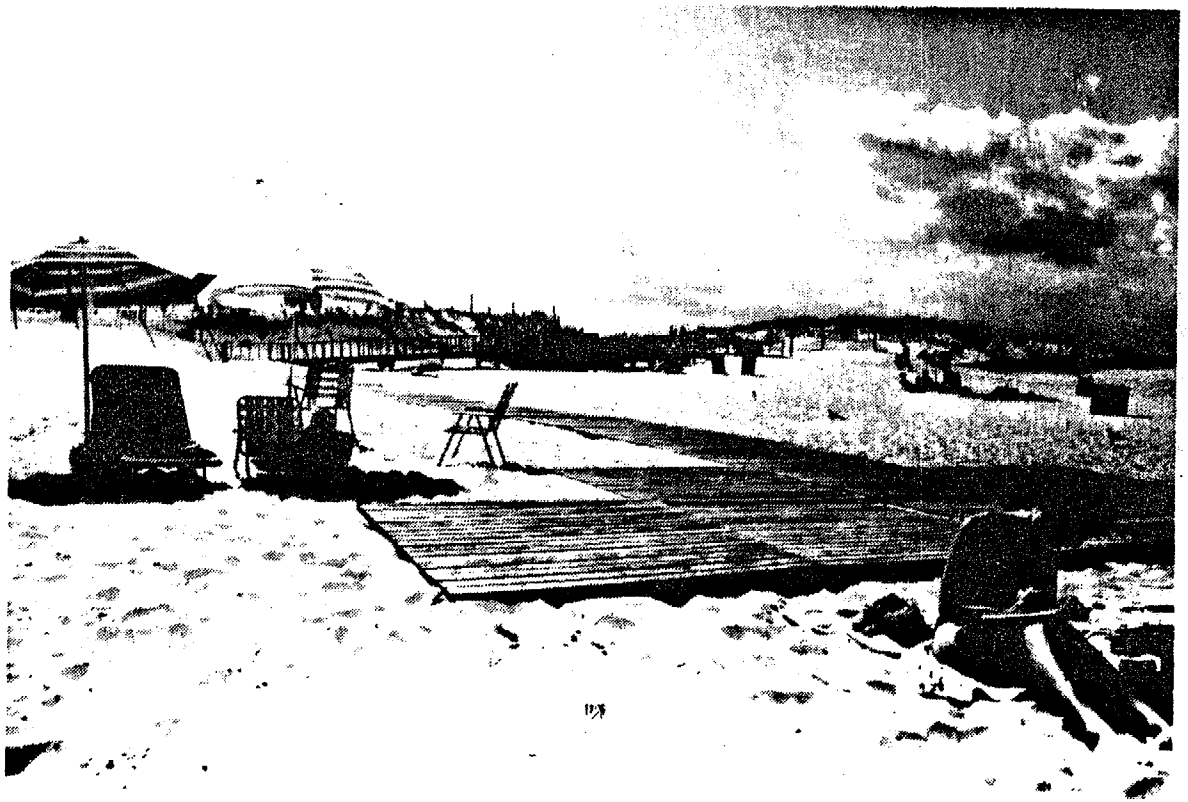




PLANK MATS



Island Beach State Park provides barrier free access to its beach with ramps and landings.

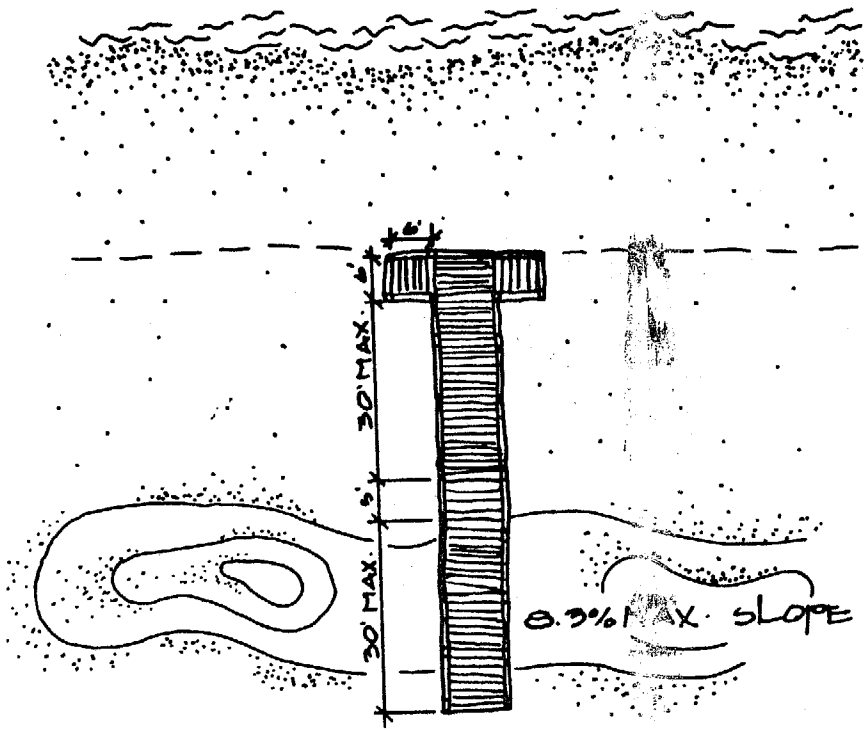


Innovative design solutions should be developed to provide greater access to beaches throughout the State.

Outdoor accessibility should be provided for all people, of all age levels and of all levels of mobility. Most importantly, accessibility must be continuous — from the curbside to the water's edge. Movable handicapped access ramps can provide the link often missing in waterfront design. By providing handicapped individuals with more than a distant visual experience, they may share the pleasures of the water.

Design Guidelines

- Deck boards should be placed perpendicular to the direction of traffic
- Spacing between planks should not exceed 1/2 inch
- Surfaces should be kept clear of sand and debris
- Signage indicating handicapped public access should be posted at all outlets
- Ramps greater than 5% must provide a handrail
- Slopes of 8.3% (maximum) must provide level landings at 30 foot intervals.



HANDICAP ACCESS RAMP & LANDING

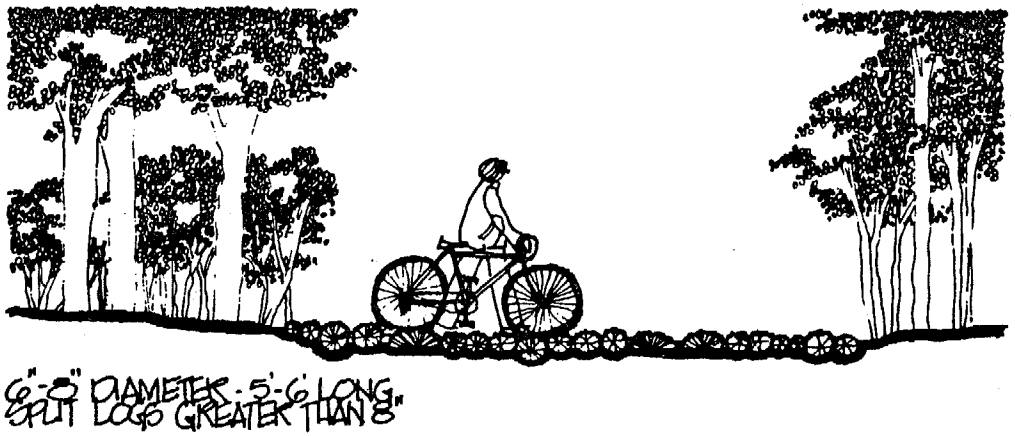
DECKS, BOARDWALKS, AND VIEWING PLATFORMS

Decks, boardwalks and viewing platforms allow the public to access wet areas with the least amount of disturbance to the environment. Overland flow of water under raised structures may continue unimpeded and potential degradation and destruction prevented. Several types of trail systems are possible and range from primitive and inexpensive to highly sophisticated and more costly.

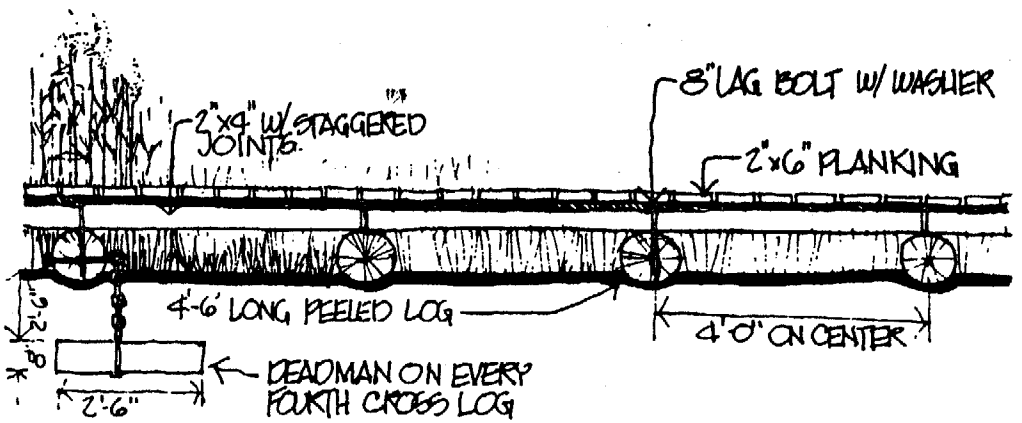
The least expensive trail is a corduroy — logs laid side by side transversely. Use should be limited to areas that are moist and subject to occasional flooding.

A more sophisticated corduroy may be constructed in wet areas. Wood decking may be placed over log sections and anchored with deadmen into the ground.

In areas of shallow water it may be more desirable to raise the trail above the ground. This may be accomplished using more frequent log sections and replacing full length log poles with 2' x 4's.



wetland crossing/moist



wetland crossing/shallow water

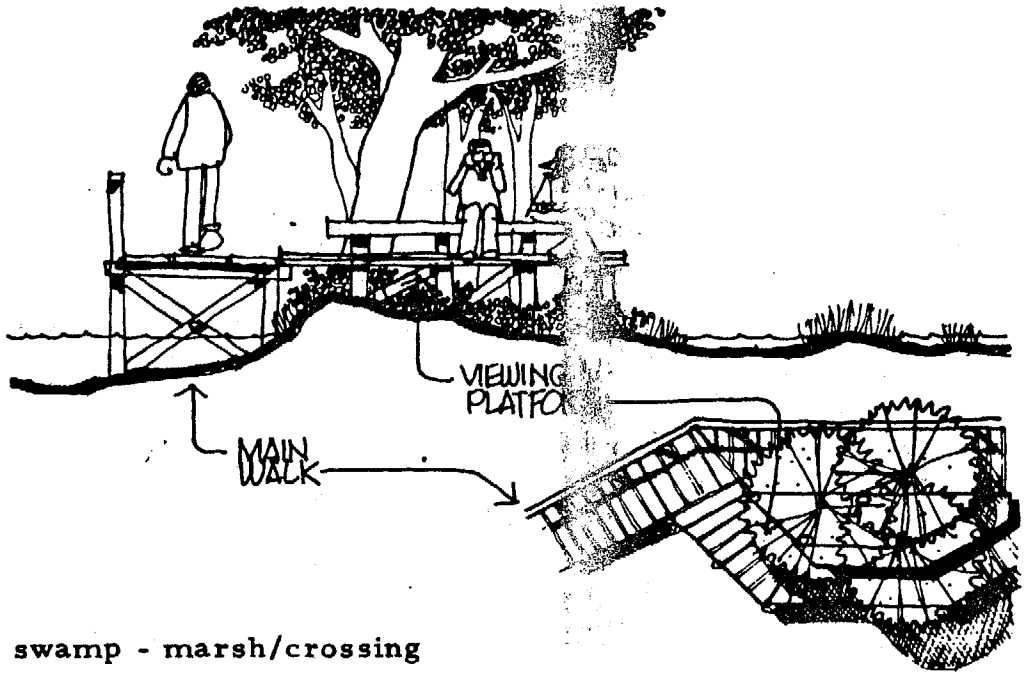
* Source: Patriots' Path, Miceli Weed Kulik, 1975.

A more elaborate system should be designed for marshy areas where water depth varies, and free overland water flow must be maintained. A boardwalk supported on piers or piles may be constructed in a number of ways. A railing should be incorporated if the boardwalk is over 2 feet above ground level.

* Source: Patriots' Path, Miceli Weed Kulik, 1975.

Design Guidelines

- Wood should be rot resistant and treated with chemical preservatives.
- All wood members should be maintained annually with wood preservative.
- Decking should be laid bark side up and pitched to drain.
- Spacing of deck planks should be 1/4 to 1/2 inch.
- All metal fasteners should be hot-dipped galvanized or aluminum.
- Railings should be placed at a 42 inch height above finished grade.
- Trail width should be a minimum of 4' wide.



swamp - marsh/crossing

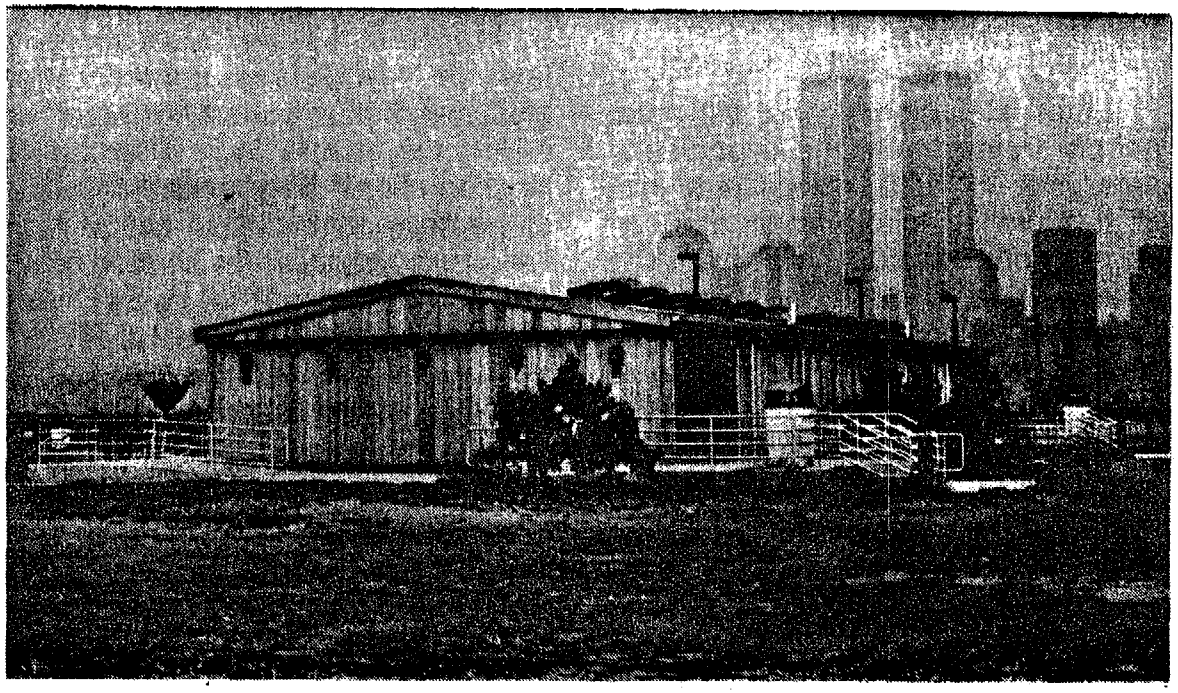
* Source: Patriots' Path, Miceli Weed Kulik, 1975.

RESTROOM FACILITIES

As a civilized nation, it is an important responsibility to provide the public with a most basic amenity — restroom facilities. If people are to spend pleasant recreation time away from home, it is necessary to supply them with a minimum level of comfort. Any public park or promenade that draws a large population, should provide at least one restroom facility for each, men and women. Equally important is the proper maintenance of these facilities. Regular maintenance and supervision helps keep them clean and usable for a long period of time.

Design Guidelines

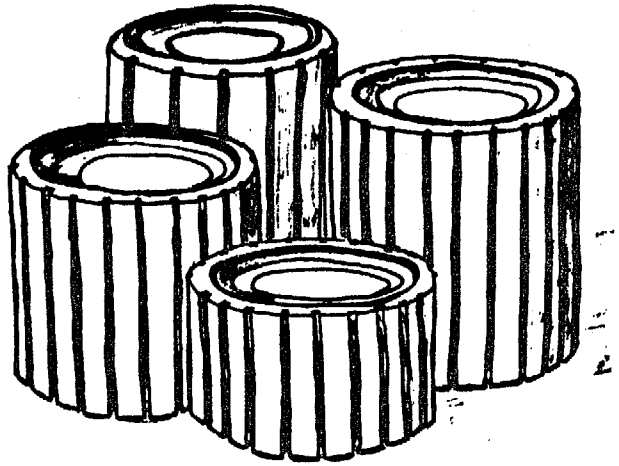
- Provision for handicapped individuals
- Locate facilities within a short distance of most heavily used areas
- Maintain facilities frequently (resupply, clean, repair)
- Architecture of building should be compatible with the surrounding area
- Restroom facilities may be combined with a food or newspaper concession, where appropriate
- Post signage to direct people to facilities



Attractive, well maintained facilities should be located within easy reach of public accessways.

LITTER CONTROL

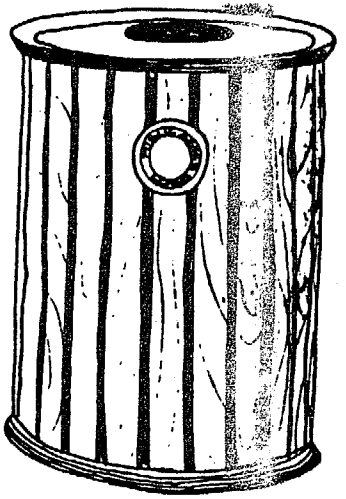
Litter is unsightly and will deter people from patronizing a particular area. Not only is it unpleasant to look at, it draws insects, animals and can be a safety hazard. To prevent the deterioration of public spaces, it is important that trash receptacles be located frequently along public accessways and at critical entry/exit points. Establishing a regular maintenance schedule, which should be based upon intensity of use, is equally important.



In light of the mandatory recycling laws in New Jersey, consideration must be given to the way in which we collect our trash. Every litter control location should be provided with four separate receptacles to contain the various recyclables. (i.e., trash, glass, aluminum, newsprint) Each bin should be clearly identified. A trash/recycling logo may be established to coordinate with the public access logo. A coordinated identification system should be used throughout the public access network.

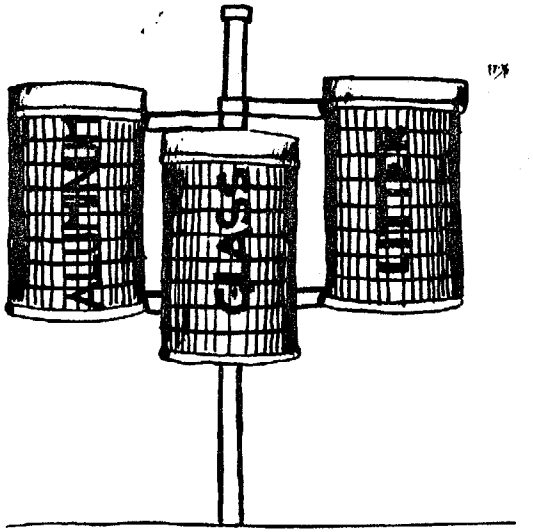
Design Guidelines

- Distinct design, decorated, easily recognizable, possibly bearing a public access or DEP logo
- Provide four receptacles at every location for trash and recyclables (i.e., trash, glass, aluminum, and newspaper)



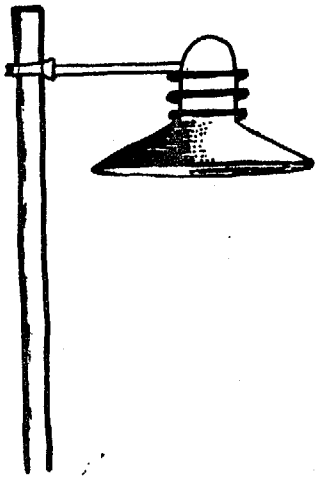
- Accessible to maintenance crews
- Receptacles should be securely anchored to protect from wind, vandalism and animals
- Avoid metal receptacles where salt and sand are present
- Receptacles should have drainage holes if exposed to precipitation
- Provide trash collection on a regular basis — depending on intensity of use

- Vary the height of the 4 receptacles for visual interest
- All four receptacles should be of the same style
- Locate receptacles at all public access entry points and at regular intervals along accessways
- Must be accessible to handicapped people
- 3 foot maximum height to top of receptacle
- Semi-open container preferable for handicapped persons



LIGHTING

"The purpose of outdoor lighting include: (1) improving the legibility of critical nodes, landmarks, and circulation and activity zones in the landscape; (2) facilitating the safe movement of pedestrians and vehicles, promoting a more secure environment, and minimizing the potential for personal harm and damage to property; and (3) helping to reveal the salient features of a site at a desired intensity of light in order to encourage nighttime use of a particular environment."*

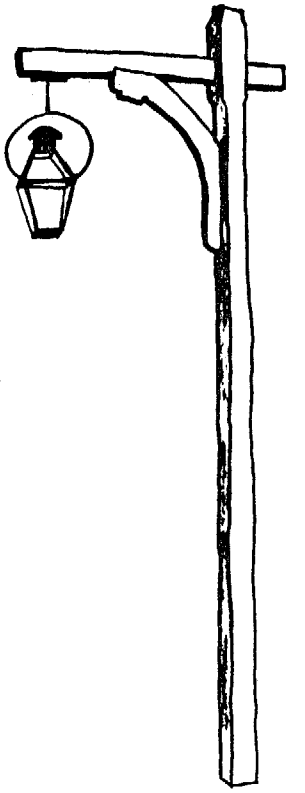


* Source: Time Saver Standards for Landscape Architecture, 1988.

There are three categories of light fixtures that should be considered when designing waterfront public access: area lighting, mid-level lighting, and low level lighting.

Area lighting is used primarily to illuminate large areas such as parking lots. An appropriate pole height may vary from 16 feet to 25 feet.

Mid-level lights are best used for pedestrian areas. Average pole height ranges from 10 feet to 15 feet. A wide variety of fixture styles and light patterns are available.

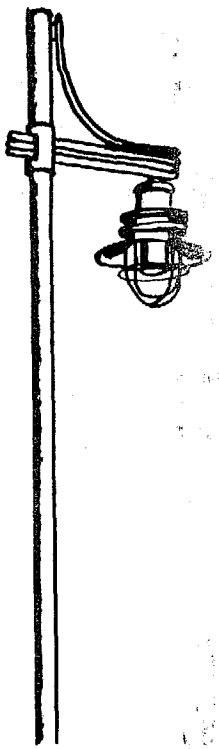


Low-level lights include step, wall, path and bollard lights. Bollard lights, usually 24 to 42 inches high, cast light downwards and are used primarily to illuminate a pathway. When placed at a frequent interval, they help define a line. These types of lights can be used to great effect along the walkers' edge. Additional mid-level lighting is often necessary to minimize glare.

- Recommended footcandle levels:

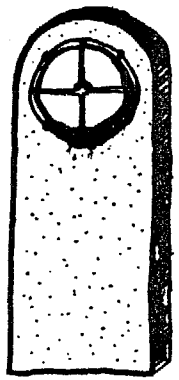
Pedestrian pathways	0.5 fc
Parking areas	1.0 fc
Piers	2.0 fc
Bikeways	0.5 fc

- Use durable light fixtures to minimize vandalism
- Highlight important signage
- Choose a lamp with a high average life hour to minimize maintenance



Design Guidelines

- Light standards should be UL approved for wet locations
- Automatic on-off mechanism
- Provide cut-off (house shield) when adjacent to residential areas
- Create uniform light distribution
- Sufficient light at major cross-walks and potential hazard areas

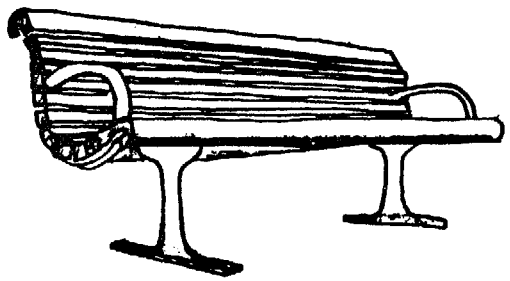


SEATING

People of all ages and degree of mobility enjoy an occasional place to pause, rest, and take in the view. Benches, seatwalls and steps all provide places for pedestrians to stop and can be integrated with a building, walkway, or park. To ensure the greatest comfort for the individual, these seating elements should be designed with the user in mind.

Design Guidelines

- Armrests to facilitate sitting and rising, especially for individuals with limited strength
- Benches and seatwalls should be 16 -18 inches wide; and 14 - 18 inches high



Seating should be located to take best advantage of views and its design should be sensitive to the microclimate.

- Seating should have a durable finish and solid construction to minimize maintenance and vandalism
- Comfort and simplicity of form should be emphasized
- Locate seating at frequent intervals along accessways
- Locate seating to take best advantage of views
- Shelter seating from wind.
- Locate seating to offer a variety of conditions — shade, sun, activity and peacefulness.
- Set benches back from heavily trafficked routes.

PARKING

For the waterfront to be truly accessible to all people, provision should be made for both pedestrian and vehicular traffic. Wherever possible, a parking area should be provided adjacent to, or within a reasonable distance of, the public access entry point. The number of spaces required will depend on each individual site and circumstances. Often the availability of parking is a major factor affecting the intensity of use of a particular site. However, the presence of other facilities, such as restrooms, concessions, showers and a boat ramp, may determine the length of stay and the parking needs of the people who use the site.

Design Guidelines

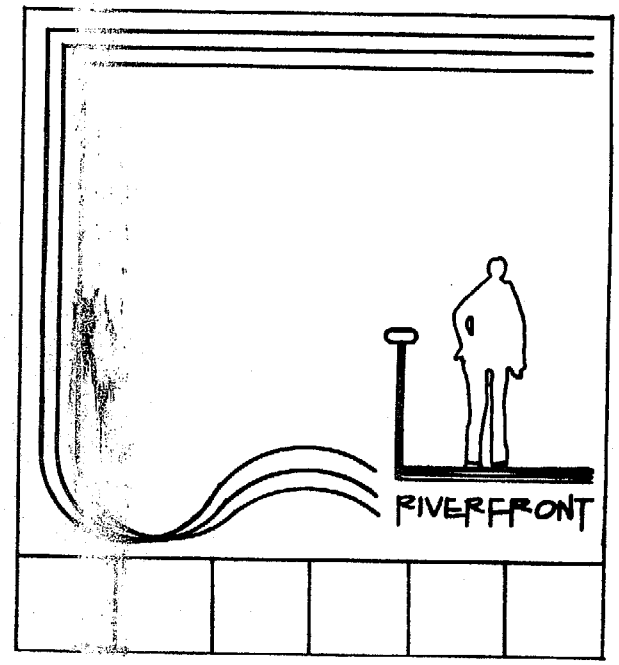
- Provide a minimum of 1 handicapped parking space per lot (12' x 18').
- Handicapped parking should be clearly marked with signage and located adjacent to public access entry points.
- Provide an adequate number of spaces to meet expected use (based on comparison to similar site).
- Design for compact cars, to the maximum extent allowable, to reduce paved surface area.
- Gradient 1% - 5% for positive drainage.
- Gradient 2% maximum for handicapped spaces.
- Pitch parking area away from water's edge, dunes or other sensitive areas.
- Pavement surface should be permeable — gravel or grass block — to minimize runoff. Sand or bare soil is not acceptable.
- Runoff flow should be contained in a grass swale or other control channel.
- Drainage should be handled on site. Stormwater infrastructure should be minimized to reduce costs, maintenance, and minimize potential pollution of nearby water bodies.
- Curbless parking lots with adjacent swales or planting areas are encouraged. Wheel stops should be used to prevent vehicles form parking on planted or unpaved areas.
- Provide landscaping — shade trees, shrub masses — to buffer parking. Planted islands should be introduced when large expanses of pavement are necessary.
- Boat launch facilities should provide parking for cars, trucks and trailers.
- Provide a minimum of one public access sign and a cluster of litter control receptacles at each parking area. (See Signage and Litter Control)
- Preserve or enhance existing native vegetation when possible.
- Parking for bicycles and motorcycles should be provided.
- Utilize shared parking arrangements with adjacent uses wherever feasible.

SIGNAGE

Signage and bold identification are the keys to an effective public access program. A standard logo sign that will be quickly recognized as marking a public waterfront accessway should be mounted at all outlets of a public accessway. Additional signage should be posted to inform the public of sensitive environments, such as dunes; safety hazards such as steep bluffs or slippery rocks; limits of public property; and other points of interest.

Design Guidelines

- All public facilities should be clearly identified. Standard international symbols for bikeways, restrooms, telephones, parking, food concessions, first aid, etc. should be used wherever possible.
- The designs of all signs should be bold, appealing and easily recognizable.
- The colors of the letters or logo should contrast with the background so it can be easily read from a distance.
- Signs painted in various places, such as on pavement for handicapped parking or bikeways, can supplement posted signs.
- Catchy phrases and humorous invitations have proven effective in promoting use of litter receptacles or to discourage certain activities, such as unlawful parking. For example, the City of New York posts signs that warn "Don't even think of parking here!". Litter receptacles in Baltimore have become part of a basket game with an invitation to "Jam One"
- Avoid "NO" signs.
- Signs should be constructed of durable, economical materials.
- A distinct logo for waterfront public access should be developed and used throughout.
- Signs should be located within easy view of pedestrians and motorists.
- Signs should be placed a minimum of three feet above ground level.



CRITICAL AREAS

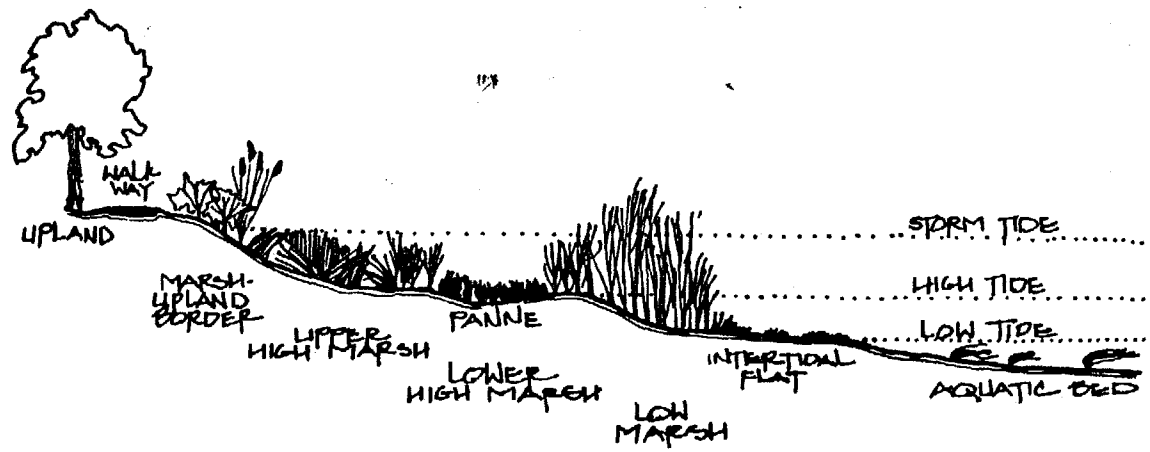
The coastline is characterized by critical areas which make the shorefront environmentally unique. These critical areas include wetlands, beaches, dunes, erosion hazard areas, steep slopes and coastal bluffs, and endangered or threatened habitat.

To help ensure the preservation of these areas, and to facilitate safe design of public access structures in and around them, special design and siting standards should be considered. The information presented in this section defines the special areas, describes policy constraints as addressed in the "Rules on Coastal Resources and Development," (NJAC 7:7E-1.1 et seq.) and the Freshwater Wetlands Act of 1987 and provides recommendations for design specifications.

WETLANDS

Wetlands are transitional lands between well-drained uplands and permanently flooded lakes, rivers and coastal embayments. They are generally characterized by wetland plant species, hydric soils, and/or the presence of water at some time during the growing season of the year. According to the "Rules on Coastal Resources and Development," wetland areas are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a majority of vegetation adapted for life in wet soil conditions.

Wetland areas are regulated under the Wetlands Act of 1970 (NJSA 13:9A-1 et seq.) and the Freshwater Wetlands Protection Act of 1987 (NJSA 13:9B-1 et seq.). All coastal wetlands located in the Raritan Basin, south along the Atlantic Ocean and north along Delaware Bay and River are subject to the Wetlands Act. The Freshwater Wetlands Protection Act provides regulation of freshwater wetlands and forested wetlands, such as white cedar stands, hardwood swamps, and other lowland forest types.



TYPICAL SALT MARSH PROFILE

Coastal and freshwater wetlands are especially valuable land areas within the coastal zone. Wetlands serve as habitat for threatened and endangered species, natural wastewater treatment areas, flood control areas, and finfish and shellfish breeding and nurturing grounds. Due to the unique value of wetlands, development of any kind, including public access structures, should avoid wetlands.

Development in wetlands is prohibited, except under special conditions. According to the "Rules on Coastal Resources and Development," construction within wetlands is only permissible if:

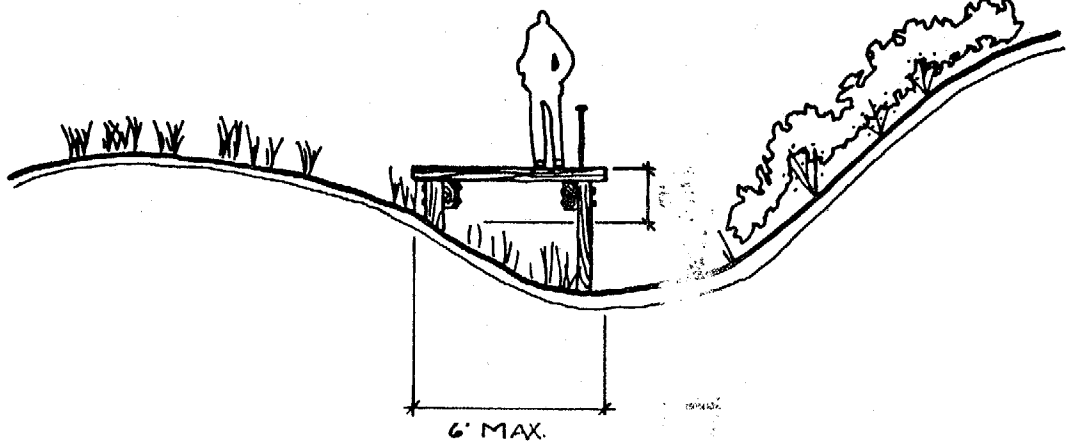
- The use requires water access or is water-oriented as a central function of the activity;
- There is no prudent or feasible non-wetland alternative site;
- The construction will result in the minimum feasible alteration or impairment of natural circulation; and
- The construction will result in the minimum feasible alteration or impairment of the natural contours and vegetation of the wetlands.

Public access points generally meet the "water access/water-oriented" and "no alternative site" conditions. Special design considerations for public access siting may be necessary to meet the conditions pertaining to minimum alteration of the natural tidal circulation and natural contour and vegetation of wetlands. Refer to the "Site Design" and "Design Standards" sections of this chapter for several alternative solutions for public access near wetlands.

Public access facilities or structures which may encroach upon existing wetlands are discouraged, but would be evaluated on a case by case basis by the Department of Environmental Protection. The NJDEP Division of Coastal Resources should be contacted for review and comment at the earliest phase of project conceptualization and design.

If accessway development is permitted in wetlands, certain standard design considerations should be incorporated.

- Public accessways (walkways/catwalks) should be designed to a height of at least three feet above the maximum understory height of existing wetlands vegetation.



- Walkways should not exceed a width of six (6) feet.
- The preferred construction material is cedar or CCA treated pine.
- The deckboards for the walkway should be adequately spaced to allow light penetration to the underlying vegetation.

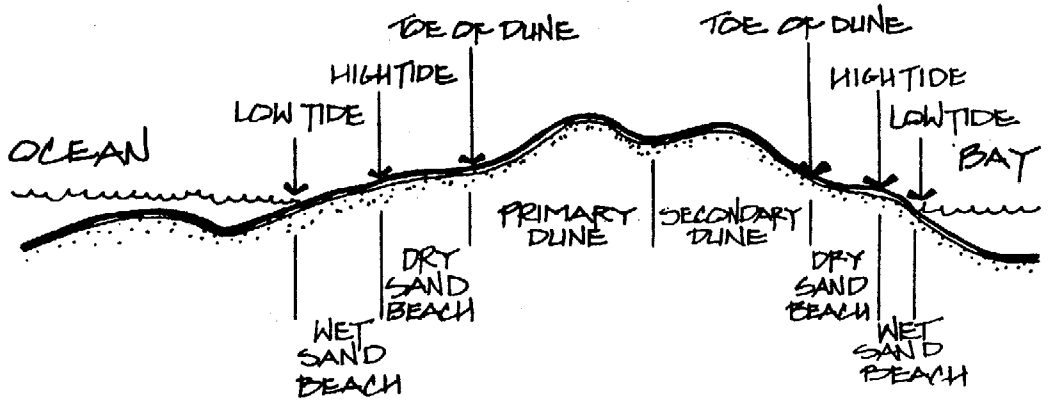
BEACHES AND DUNES

Beaches are gently sloping unvegetated areas of sand or other unconsolidated material that extend landward from the mean high water line to either the vegetation line; a man-made feature, such as a road or seawall; or the dune.

Dunes are wind or wave deposited, or man-made formations, of vegetated or drifting sand. They generally lie parallel to, and landward of the beach. The term "dune" includes the foredune, secondary and tertiary dune ridges, as well as man-made dunes.

Beaches and dunes are irreplaceable components of the shoreline. They protect marshes and adjacent upland from storms, flooding and erosion. They provide an important wildlife habitat and tend to add both a scenic and recreational value to shorefront areas.

The NJDEP Division of Coastal Resources encourages public access and barrier free access to beaches and the water's edge. Unrestricted public access to the State's beaches is desirable and promoted to enable all residents and visitors to enjoy the recreational, aesthetic, and ecological benefits of these resources. Coastal development must provide reasonable public access to the beaches.



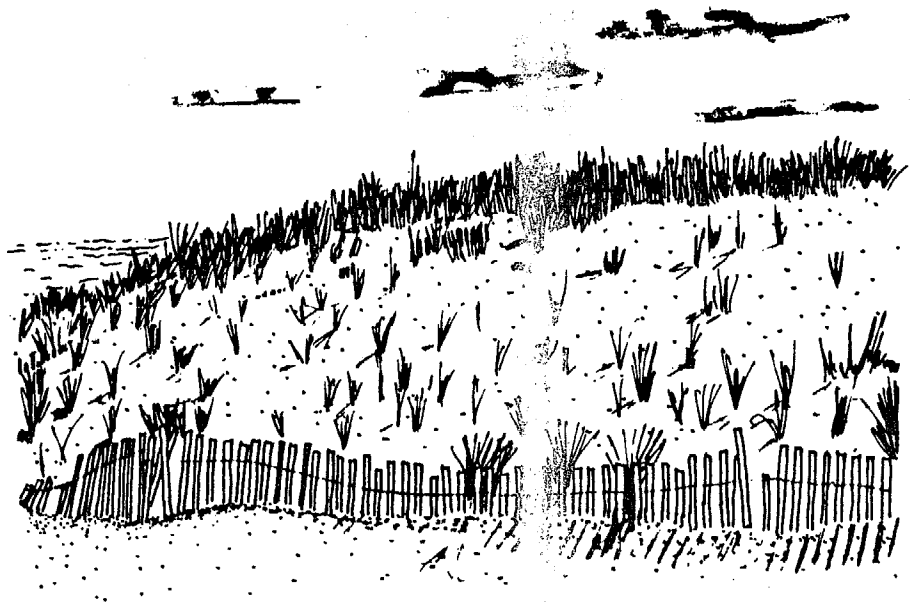
Development on beaches is very restricted. Only development that has no alternative location other than a beach, such as the reconstruction of existing amusement piers and public access fishing piers and boardwalks, may be permitted on the beach.

Although development on dunes is prohibited, dunes must be crossed to access the beach. Limited, designated accessways for pedestrian and authorized motor vehicles should be designed in a manner which causes the minimum feasible interference with the beach and dune system. Accessways should be oriented such that they cause the minimum feasible threat of breaching or overtopping as a result of storm surge or wave runup. In general, access structures should be designed to account for the dynamic and sensitive nature of the dune system.

Design of access paths across dunes may be simple or very elaborate. The simplest marked path is bare sand, though compacted soil (a clay loam mix) would be more durable. Occasionally, mats constructed of planks fastened together with flexible connections or braided cable are used as a walking surface. These are especially useful on dune banks where footing is difficult in the dry sand. Even on the simplest path, snow fencing or a post and rail fence for guidance should be provided.

More elaborate access paths consist of raised wooden walkways with railings. These require more maintenance and are more expensive, but are more effective in protecting sensitive dune surfaces. Walkovers should be built high enough off the dune surface to allow for sand accumulations and healthy plant growth underneath. Additional protection of the dunes may be accomplished by erecting dune protection signs which control pedestrian traffic. When human or natural factors cause damage to dunes, these areas should be repaired with snow fencing and beachgrass plantings. The planting of native vegetation in conjunction with the construction of the accessway is recommended for stabilization and aesthetic purposes.

Source: Lopez, Landscape Architecture Technical Information Service, 1985.



EROSION HAZARD AREAS

Erosion hazard areas are shoreline areas that are eroding or have a history of erosion, causing them to be highly susceptible to further erosion and damage from storms. Because of these environmentally sensitive characteristics, development is prohibited in erosion hazard areas except for linear development, such as roads and pipelines, which complies with the coastal policy on linear development (NJAC 7:7E-6.1).

Erosion hazard areas may include high velocity wave and flood zones. When considering design and placement of access structures in these areas it is important to determine the worst case scenario for erosion and storm wave activity. Site conditions regarding geology, storm conditions and erosion potential should be investigated as an integral component of the planning process for any development within high velocity wave and flood zones.

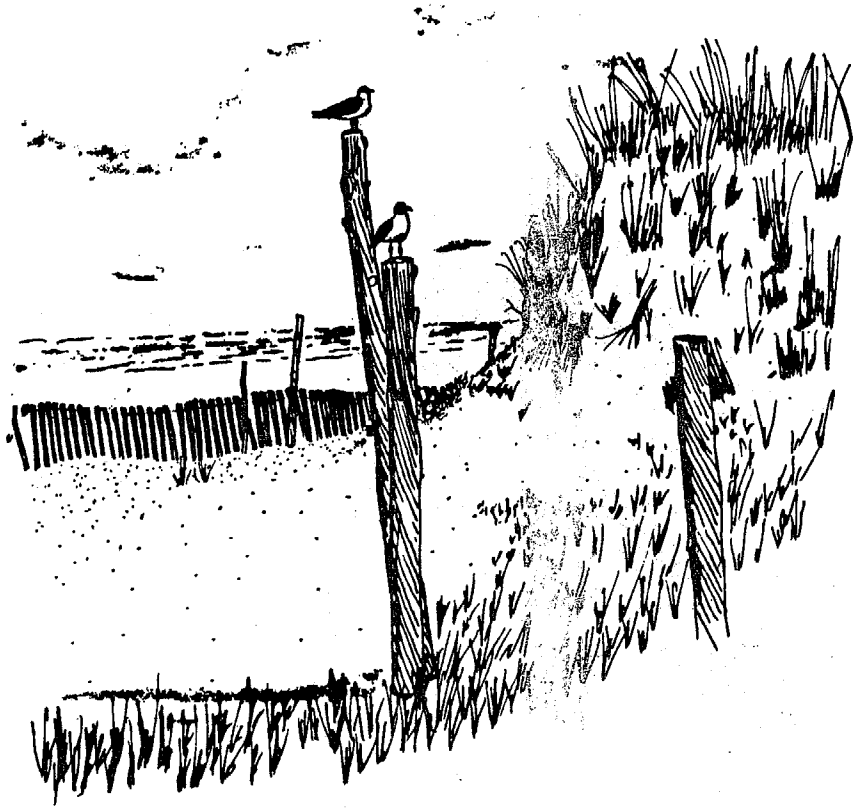
Designing an accessway sturdy enough to withstand the most severe storm impact is one approach to managing storm wave or erosion damage. The California Coastal Commission and State Coastal Conservancy Designing Accessways notes that such a design approach may minimize repair frequency but is costly in both materials and labor. Conversely, the California manual recommends that access structures in erosion hazard areas be limited to inexpensive, easily repaired structures such as ramp ways, staircases, trails or paths.

STEEP SLOPES AND COASTAL BLUFFS

Steep slopes (NJAC 7:7E-3.2) are isolated inland areas with slopes greater than 15 percent. All steep slopes associated with shoreline processes, i.e., adjacent to the shoreline or contributing sediment to the system, are considered coastal bluffs.

A coastal bluff (NJAC 7:7E-3.31) is a steep slope of consolidated (rock) or unconsolidated (sand, gravel) sediment that is formed by wind and water erosion forces, and which is adjacent to the shoreline or demonstrably associated with shoreline processes. The toe, face, and lip of the bluff are all very sensitive to erosion.

Coastal bluffs are most prominent in New Jersey along the Delaware River at Roebling and Florence and along the Raritan Bay at Aberdeen Township and Atlantic Highlands. Coastal policies prohibit development on coastal bluffs, except for such linear development as roads and pipes.



Disturbance of coastal bluffs which undermines their natural resistance to wind and rain erosion increases the risk of their collapse and cause cuts in the bluff. Vegetation helps stabilize the bluffs and planting programs are encouraged.

Public accessways may be inappropriate on coastal bluffs due to these stability constraints. The NJDEP Division of Coastal Resources, Office of Coastal Engineering should be consulted for accessway siting and design.

If public access is permitted in coastal bluff areas, it should be restricted to designated stairs or roads built especially for access purposes. Accessways located on coastal bluffs should be designed such that the structure is nearest the toe of the bluff and as far as possible from the ocean's edge. The farther a facility is from the water's edge, the greater the distance storm waves must travel before reaching the structure. This reduces the amount of damaging and erosive energy the waves contain at the time of impact on or near the accessway. Designs incorporating this approach include stairways and ramps which descend parallel and adjacent to a bluff, rather than descending perpendicular from the bluff towards the shoreline.

* Source: Lopez, Landscape Architecture Technical Information Service, 1985.

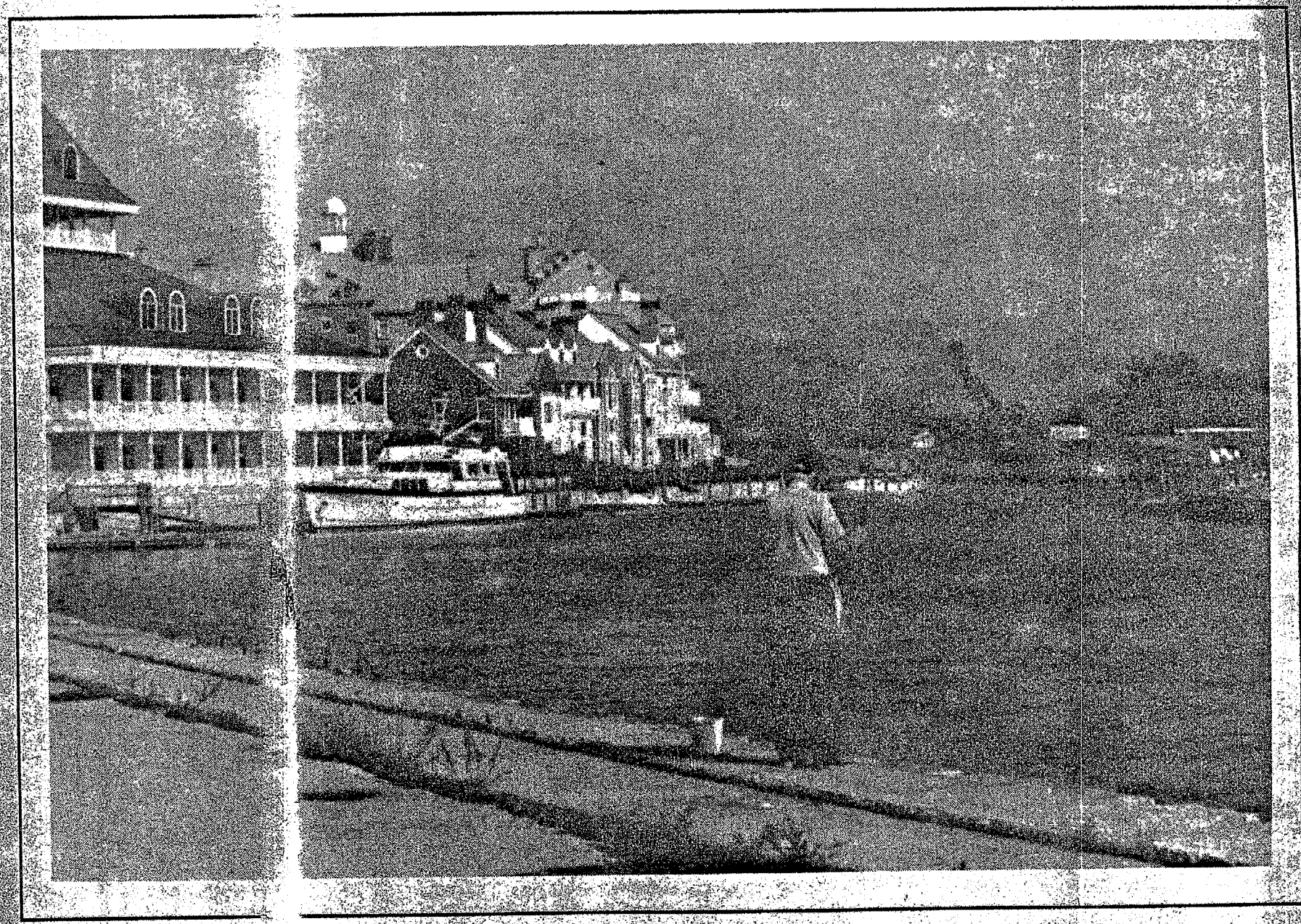
Stairs typically are built of treated wood and should be set up off the soil surface at least 12 inches. Minimum spacings of 1/4 inch between planks will allow for thorough drainage and some light penetration underneath for plant growth.

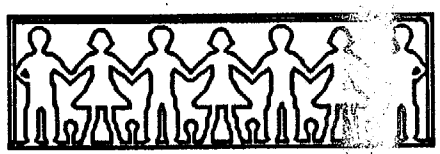
Signs for bluff areas should direct people to access points. Warning signs should prohibit walking or climbing on the face of bluffs and identify penalties, if any, for violators. Signs would be appropriate at both the top and bottom of the bluff. The sensitive nature of coastal bluff areas indicates the use of special management considerations and stabilization techniques.

As is the case in high erosion areas, it is recommended that access structures at coastal bluffs be limited to inexpensive, easily repaired structures such as ramp ways, staircases, trails or paths. These accessways should be maintained on a regular basis and damaged areas promptly repaired. Existing vegetation should be conserved and enhanced, and the existing profile should be protected.

Chapter 5

Maintaining Public Access





An effective public access program must include a plan for the future. Public access, once secured, must be maintained over time for it to be successful and continue to be usable.

Designing and building public accessways has been the focus of much of the public access issue. Although these aspects of public access are critical, the issues related to maintenance of these accessways are equally important.

What happens to public accessways and parks after the ribbon-cutting ceremonies is vital to the success of waterfront access. Waterfront parks and walkways must be maintained, and people must feel welcome to use them.

Building public access to the waterfront may be accomplished in many different ways depending upon what opportunities the circumstances and the situation offer. Once public access is finally in place there are two critical needs that must be met.

First, it must be maintained. Some entity must take on the responsibility for making certain that efforts toward waterfront access do not become temporary successes because they are not adequately maintained.

Second, people must know that the waterfront is available to them and they must be able to get to it. A resource has no value to a person if he/she does not know of its existence or cannot reach it. Public access resources should be made public information and people should feel welcome to use them.

MAINTENANCE

The solution to the maintenance question differs depending upon the location of public access elements and the type(s) of adjacent uses. If public waterfront promenades or plazas are incorporated into a commercial development, they should be maintained by the owner or operator of the commercial facilities. The waterfront features in such a development would be part of the overall site and would provide an amenity for its customers/clients/occupants. Restaurants, retail shops, and other commercial establishments generally assume the cost of public access because they encourage the public to use their facilities or to visit their businesses. Maintenance of the waterfront features should be part of the overall maintenance of the site.

Waterfront public access features on public land, such as within a municipal, county, or state park, similarly should be maintained by the caretakers of the surrounding land. Maintenance is part of the public provision of park services. Although the cost of liability insurance is an expensive portion of park maintenance and may be exacerbated by a waterfront location, waterfront parks are an important part of the local and regional open space resources. People enjoy waterfront parks, and park departments and commissions should strive to provide pleasant recreation facilities for their constituents. Although maintenance,

including liability, is expensive, it is a vital part of the public role. Financial assistance for municipally-run waterfront parks, particularly for liability insurance, deserves further consideration.

The situation of a publicly accessible waterfront feature within a private, non-commercial development raises questions which are more difficult to answer. Innovative and negotiated solutions may be the best way to address public access maintenance in areas with no easily identifiable caretaker.

Waterfront access must be maintained, but the question of who takes on the responsibility may vary depending upon the individual situation and circumstances. In some instances, a reasonable user fee may be charged to help defray maintenance costs. A number of potential maintenance arrangements are briefly described below.

- *Municipal Park and Recreation Department*
  In areas where privately-owned waterfront accessways are adjacent to municipal parks, the municipality may be willing to accept some of the responsibility for maintenance. Perhaps the private landowner could contribute funds to help pay the costs associated with maintenance, while the municipality provides the labor from its parks and recreation department staff. Thus the landowner could reduce costs by eliminating the burden of maintaining the waterfront access, while the municipality could use the funds to help defray the fixed cost of municipal workers who would be required to maintain other municipal parks.

- *County Park Commissions*
  Since access to our waterfronts is a regional recreation resource, the county park commission may be able to take on responsibility for maintaining waterfront accessways. Involvement by the county would be most likely in instances where an extensive waterfront path system connects more than one municipality within the county.

- *Regional open space and conservation organizations*
  In cases where land trusts or other conservation organizations have acquired waterfront sites for public access, they will either maintain the resources themselves or attempt to transfer maintenance responsibility to a local parks department. If the municipality has other adjacent parks and is adequately equipped, such an arrangement may be a viable solution. In other instances, volunteer efforts may be available to help with the labor involved in maintenance operations, but may not be a reliable long-term solution.

- *Private Residential Condominium or Homeowners Association*
  In situations where a residential development is adjacent to waterfront public access, the maintenance of the accessway may become the responsibility of the condominium or homeowners association. Where a developer builds the residential development and establishes the association, a plan for public access maintenance should be devised as part of the overall maintenance program for the development. For example, a fund could be established at the outset, with an initial contribution from the developer, for operation and maintenance of the waterfront access elements. The keys to the creation of successful waterfront public access within a residential development are good, sensitive design and forethought on the maintenance issue. These factors are integral to successful waterfront public access and should be considered very early in the planning and development of the project.

  In other instances, a private developer may construct public access improvements and then dedicate an access easement or deed the waterfront land to the municipality. In the case of the easement, the developer could continue to maintain the accessway, or the municipality could assume future maintenance responsibility. If a town accepts the deed for waterfront land, and no other maintenance arrangements are made, the municipality would be responsible for the future maintenance of the public access.

- *Volunteer Organizations/ Donations*
  Local civic or social organizations may be able to accept maintenance responsibility for local waterfront parks. For example, a boy/girl scout troop may "adopt" a waterfront and contribute their labor in removing litter and doing regular maintenance, such as painting and minor repairs. The volunteer labor may be matched with funding from local businesses or developments which benefit from the waterfront.

- *Corporate Contributions*
  The "Monmouth County Bayshore Waterfront Access Plan" encourages corporations to "adopt-a-park" and help maintain waterfront access. These programs demonstrate local commitment and a corporate good neighbor policy.

These maintenance arrangements provide a sampling of possibilities. Combinations of some of the suggested arrangements may work in

different situations. One solution may not be enough, and an innovative joint solution may be best. In any case, maintenance of accessways is vital to keeping our waterfront a useful, enjoyable resource.

PUBLIC INFORMATION AND EDUCATION

For the public to fully enjoy coastal access opportunities, it must be aware of the existence of the facilities, and of its rights and responsibilities.

California Coastal Commission,
Coastal News, January 1981

Publicity and education are important components of New Jersey's policy on waterfront public access. Sharing the word about public access opportunities, and teaching people how to care for these resources, are integral to carrying out the policy.

The New Jersey Department of Environmental Protection has periodically produced a "Public Access to the New Jersey Shore" poster which provides information on public beaches, fees, facilities and accomodations. The State's Division of Tourism, too, has prepared brochures on attractions at the shore. These publications have been clear, concise and especially informative.

Some type of poster or brochure on public access to the shore should be prepared on a regular basis; perhaps annually prior to the summer months. It could be expanded to include waterfront public access throughout the State, including rivers and bays. These types of information bulletins should be widely distributed and available to the public.

Adequate signage along or near the waterfront is an effective way to notify people of the existence of public accessways. It also serves to steer them away from areas where access is a problem. Signs should direct people to public access points, provide information about the facilities they can expect to find, and the responsibility we all share for taking care of our waterfront resources.

GETTING THERE

Traveling to the New Jersey shore during the summer months can be a difficult proposition. Traffic jams along the Garden State Parkway and the connecting roads are common, and parking in and around beach areas is very limited.

Taking public transportation to the shore alleviates much of the aggravation of driving. New Jersey Transit strives to provide convenient service and offers special beach bus and train routes.

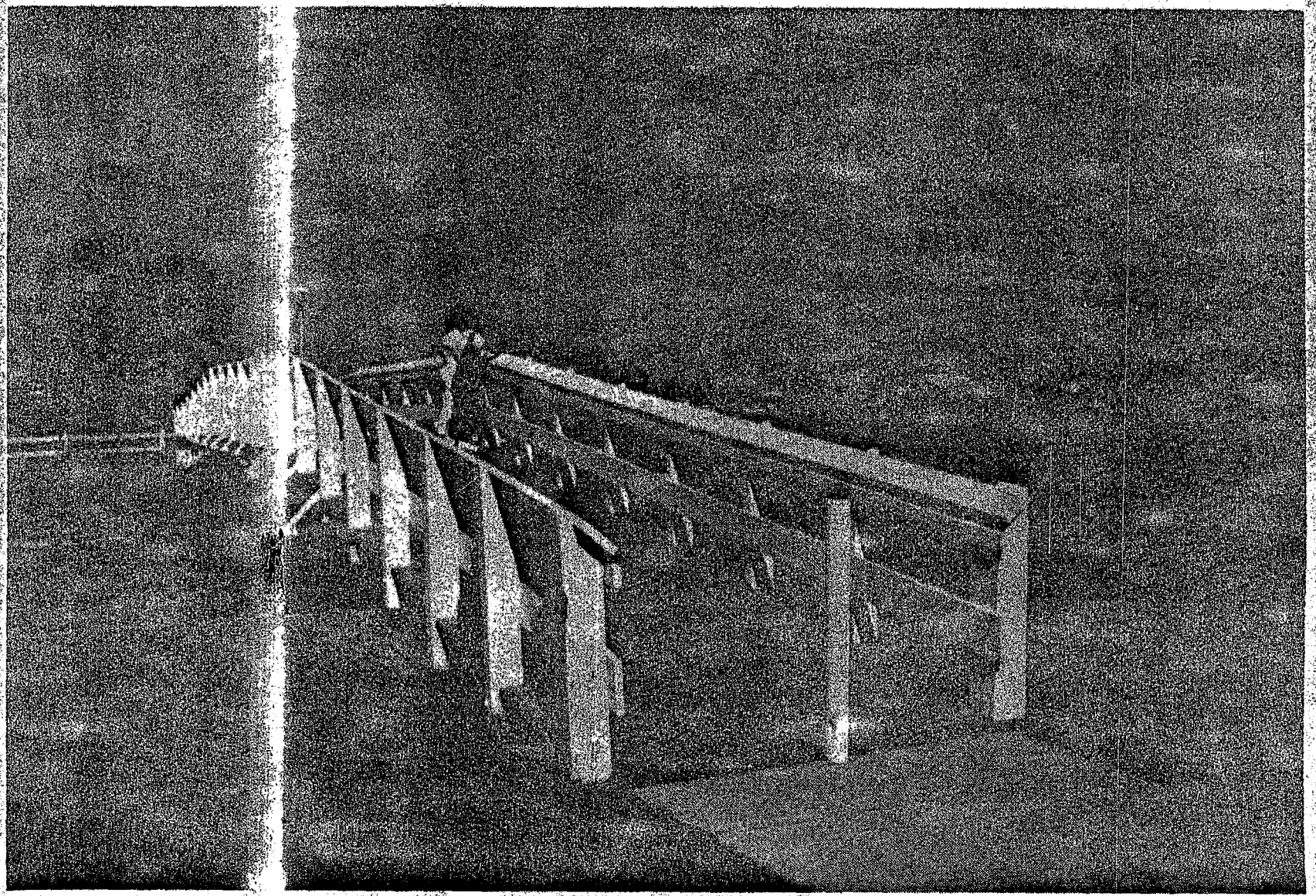
During the summer months NJ Transit runs express trains between Newark/Hoboken and shore points from Long Branch to Bay Head. The train stations in the shore towns are connected to the beach with shuttle bus service.

Shorebound buses travel between Newark, Union City and Jersey City and beach areas from Long Branch to Atlantic City. Departures are scheduled on a frequent basis to provide flexibility for the beachgoer.

Discount fares and special beach packages are available on both trains and buses. For more information, NJ Transit has a toll-free phone number, 800-772-2222, available each day from 6:00 a.m. to 12:00 midnight.

Problems in gaining access to the waterfront, or in using areas as they are designed, should be reported to the Division of Coastal Resources, CN 401, Trenton, NJ 08625, or by calling (609) 292-0060 during business hours.

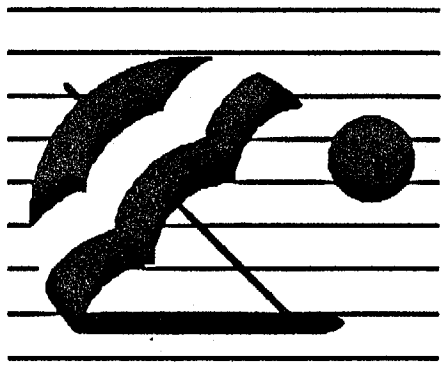
Chapter 6
Planning For The Future



As the most densely populated state in the nation, and home to over 7.6 million people, New Jersey must be vigilant in its preservation of waterfront lands. Our Coastal Zone Management Program has done much to establish public access to the waterfront for residents and visitors in New Jersey. Building on our successes, we must strengthen the commitment to freely accessible waterfronts and the pleasures and opportunities they afford.

The chapters of *Waterfront Public Access: Design Guidelines* set forth some ideas of how to achieve our goals. Listed here are additional suggestions for ways to expand waterfront public access opportunities for all the people of New Jersey.

- *Public Education Program*
  A public education program about New Jersey's waterfronts should be developed to reach people across the state and to all age levels. A waterfront public access guide should be prepared, updated regularly, and made widely available, e.g., magazine enclosures, special mailings, libraries, government offices, and information centers.



- *Celebrate the Waterfront!*
  The Department of Environmental Protection, Division of Coastal Resources and the Department of Commerce, Division of Tourism should encourage more events such as the Hudson River Walk, which "celebrate the waterfront". Towns which have a public waterfront should be encouraged to hold events such as "Coast Day" or "River Day." Waterfronts tend to be natural locations for festivals and other community celebrations.

- *Design a Waterfront Logo*
  A design competition could help rally interest and support for waterfront public access. The competition could be held at several levels — one for school age children and another for adults. In any case, the

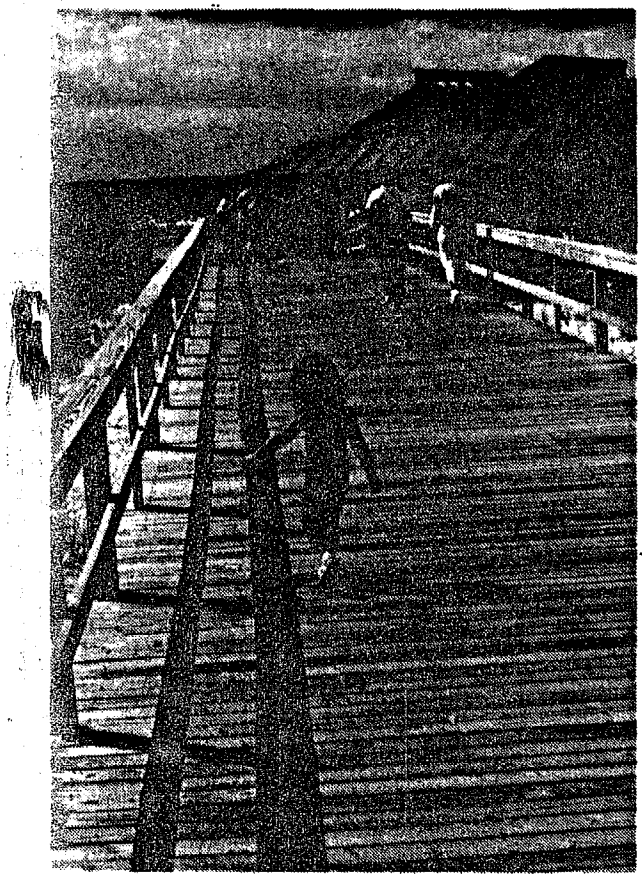
competition should be widely publicized to call attention to special waterfront resources.

Once a logo is designed, a series of signs using it could be developed to mark various kinds of waterfront access and public amenities. These signs should be placed at all waterfront public access-ways and parks.

- *Public Transportation to Waterfront Areas*
  The Departments of Environmental Protection and Transportation, in coordination with NJ Transit, should focus on expanded public transportation to waterfront recreation spots. Existing transit routes should be publicized and made as convenient as possible to encourage people to use public transportation to get to beaches, bays and rivers for recreation.

- *Technical Assistance to Municipalities*
  The Department of Environmental Protection should provide technical assistance to waterfront municipalities to help them design, construct, and maintain public accessways and waterfront parks.

- *Enforce Public Access Requirements*
  Permits which require waterfront public access should be compiled and placed in a data base from which enforcement may be conducted. Certain components of waterfront access should be in place prior to the issuance of a certificate of occupancy for private waterfront developments.



FOR MORE INFORMATION

Department of Environmental Protection

Division of Coastal Resources
(609) 292-0060

Delaware & Raritan Canal Commission
(609) 397-2000

Dept. of Fish Game & Wildlife
(609) 984-1401

Division of Parks & Forestry
(609) 292-2797

Department of Transportation*

Region 1 — Hunterdon, Morris, Somerset, Sussex, & Warren Counties
Route 183 North
Netcong, NJ 07867
(201) 347-4415

Region 2 — Bergen, Hudson, Essex, Union, & Passaic Counties
Intersection of Routes 1 S, 21 & 22
Newark, NJ 07714
(201) 548-2278
(Exception: West Milford, Passaic County Call Region 1)

Region 3 — Mercer, Middlesex, Monmouth, & Ocean Counties
Route 79 & Daniels Way
Freehold, NJ 07728
(201) 308-4100

Region 4 — Atlantic, Burington, Camden, Cape May, Cumberland, Gloucester, & Salem Counties
Route 70, New Jersey Turnpike
Cherry Hill, NJ 08034
(609) 428-6550

* For more information on fishing access from bridges

Department of the Public Advocate

Division of Public Interest Advocacy
25 Market Street
Trenton, NJ 08625
(609) 292-1692

Counties and Municipalities
Contact the local County Parks Commission or Municipal Park and Recreation Department

League of Municipalities
407 West State Street
Trenton, NJ 08618
(609) 695-3481

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